Learning in Governance

Climate Policy Integration in the European Union

Katharina Rietig

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Series Foreword

Humans now influence all biological and physical systems of the planet. Almost no species, land area, or part of the oceans has remained unaffected by the expansion of the human species. Recent scientific findings suggest that the entire earth system now operates outside the normal state exhibited over at least the past 500,000 years. Yet at the same time, it is apparent that the institutions, organizations, and mechanisms by which humans govern their relationship with the natural environment and global biogeochemical systems are utterly insufficient—and poorly understood. More fundamental and applied research is needed.

Such research is no easy undertaking. It must span the entire globe because only integrated global solutions can ensure a sustainable coevolution of biophysical and socioeconomic systems. But it must also draw on local experiences and insights. Research on earth system governance must be about places in all their diversity, yet seek to integrate place-based research within a global understanding of the myriad human interactions with the earth system. Eventually, the task is to develop integrated systems of governance, from the local to the global level, that ensure the sustainable development of the coupled socioecological system that the Earth has become.

The series, Earth System Governance, is designed to address this research challenge. Books in this series will pursue this challenge from a variety of disciplinary perspectives, at different levels of governance, and with a range of methods. Yet all will further one common aim: analyzing current systems of earth system governance with a view to increased understanding and possible improvements and reform. Books in this series will be of interest to the academic community, but will also inform practitioners and at times contribute to policy debates.

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This series is related to the long-term international research program, the Earth System Governance Project.

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Earth System Governance Series Editors

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I am very grateful to the policymakers at the European Commission in the directorate generals (DGs) for Agriculture, Climate Action, Energy, and Environment, and their respective cabinets, as well as the members of the European Parliament, representatives of the member states in the Council of the European Union (EU), both in Brussels and in the member states, for volunteering their time and sharing with me their experiences in the process of drafting and negotiating the Renewable Energy Directive (RED) and Common Agricultural Policy (CAP) Directive, as well as reflections on learning. The insights of the environmental nongovernmental organization (ENGO) representatives, industry lobbyists, and researchers involved in the process also proved to be extremely valuable for triangulating and verifying the policymakers' reflections on their learning and its influence on the policy outcome. Without the honest, frank, and often self-critical insights of these key individuals, this research would not have been possible.

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Newcastle upon Tyne, February 2021

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List of Abbreviations

CAP	Common Agricultural Policy
COREPER	Committee of Permanent Representatives
Council	Decision-making bodies of the Council of the EU, including European Council (heads of states), Council of Ministers and Council working groups consisting of technocratic experts and civil servants from the national permanent representations to Brussels and the member states' ministries responsible for the respective policy area
CPI	Climate policy integration
DG Agri	Directorate General for Agriculture and Rural Development
DG Clima	Directorate General for Climate Action
DG Energy	Directorate General for Energy
DG Env	Directorate General for Environment
ENGO	Environmental nongovernmental organization
EPI	Environmental policy integration
EC	European Commission
EP	European Parliament
EU	European Union
FQD	Fuel Quality Directive
GATT	General Agreement on Tariffs and Trade
HEBDO	Weekly meeting of the heads of cabinets at the European Commission
ILUC	Indirect land use change
IPCC	Intergovernmental Panel on Climate Change
LULUCF	Land Use, Land Use Change, and Forestry
MEP	Member of the European Parliament
MFF	Multiannual Financial Framework
RED	Renewable Energy Directive
UNFCCC	United Nations Framework Convention on Climate Change
WTO	World Trade Organization

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1 Learning in Governance . . . Does It Matter?

> Policymaking is a human, personal learning endeavor. It is different from working in a sausage factory. It is more like an art.
>
> —European Commission

Over time, policy changes frequently mirror evolutions in societies' political preferences, advances in scientific knowledge, and experiences with previous actions, unintended consequences, or even catastrophic events. Regional cooperation, such as within the European Union (EU), can be motivated by the prospect of economic prosperity and the hope of reducing negative environmental impacts through collective action. As the interests of key actors change, additional knowledge is taken into account, or experiences with previous policies are reflected upon, changes in policies can result in further reactions of key actors. These developments could be summarized as learning in the process of governing institutions, rules, and practices in earth system governance. The questions are whether policy and governance outcomes are necessarily a result of learning among policymakers, and to what extent they occur independently.

A central challenge of earth system governance is to effectively govern international institutions and complex systems (Young 2017) by devising public policies across governance levels to address climate change and related challenges in the Anthropocene (Biermann 2014; Nicholson and Jinnah 2016). This happens through agency—that is, individuals and organizations acting as agents with the authoritative capability to govern behavior based on a certain legitimization through the governed (Betsill et al. 2020, 8). The concept of agency includes a very wide variety of actors, ranging from national governments to nonnational actors such as cities, businesses, nongovernmental organizations (NGOs), experts, domestic opposition parties,

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international organizations, and their secretariats to individuals engaging in ad hoc coalitions and issue networks (Betsill et al. 2020). While private and hybrid governance (e.g., through public-private partnerships) continue to have increasing importance to complementing and closing gaps where environmental challenges occur across jurisdictions and in contexts of limited governmental capacity (Bloomfield 2018; Park and Kramarz 2019; Partzsch 2020), public policies devised in a national or supranational context such as the EU remain a cornerstone of effective environmental and climate governance due to their enforcement mechanisms as well as the direct accountability and legitimacy of the actors involved. Earth system governance happens within multilevel, multiagency, and multiproblem settings that can be understood as polycentric governance. Going beyond the related, yet more government-focused concept of multilevel governance (Hooghe and Marks 1994) where nonnational actors cogovern with state actors for the provision of collective goods (Stephenson 2013), polycentric governance takes a broader perspective by attributing a higher level of autonomy and influence to nonnational actors such as individuals, NGOs, and companies, as well as their networks (Wurzel, Liefferink, and Torney 2019).

Originally inspired by the municipal level in the federal governance system of the United States where municipalities collaborate or compete under the umbrella of the state and/or federal level with a shared system of rules, the concept of polycentric governance emerged in the 1960s, referring to "many centers of decision making that are formally independent of each other" (Ostrom, Tiebout, and Warren 1961, 831). It was advanced in Elinor Ostrom's seminal work on governing the commons, especially with regard to private and public-private actors such as individuals, companies, and NGOs (Ostrom 1990; Ostrom 2010a; Ostrom, 2010b), and features prominently in natural resource governance (Carlisle and Gruby 2019; Thiel, Blomquist, and Garrick 2019), such as water governance (Berardo and Lubell 2016; Lubell, Mewhirter, and Berardo 2020; Schröder 2018), urban governance (Hendrigan 2020), and increasingly climate governance (Gallemore 2017). More recently, the concept of polycentric governance has been adopted and applied to the EU (Hall and Pain 2006; van Zeben and Bobic 2019), including the capacity to learn about the functioning of the EU as both a precondition for polycentric governance and a potential benefit of it (Garben 2019).

Despite this progress in our understanding of the interactions and interdependencies of actors, institutions, and decision-making processes, a gap remains in the Earth System Governance literature concerning agency, as well as in the polycentric governance and European public policy literature with regard to microprocesses such as learning among individuals and

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organizations involved in decision-making and when, why, and under which circumstances they influence the effectiveness of the governance processes and outcomes within European multilevel and polycentric governance.

In this book, I argue that there is a role for learning in improving the effectiveness of earth system governance as the process of devising rules to support peaceful coexistence, economic prosperity, and environmental sustainability in the Anthropocene. It presents a fuller picture of the empirical and theoretical puzzle on what determines outcomes in governance, and more precisely in the policymaking process. The key question is to what extent learning, which is widely regarded as a facilitating factor, contributes to policy outcomes. Learning can be a result of reflecting on failure (Ravenal 1978) or occur in the form of drawing lessons (Rose 1991) from the policies of other countries that serve as the inspiration for policy diffusion (Dobbin, Simmons, and Garrett 2007; Gilardi 2010; Perkins and Neumayer 2004). Increasing group pressure among countries to present their domestic climate mitigation and adaptation strategies at such events as international climate change negotiations (Rietig 2014) points toward coercive elements of policy transfer (Dolowitz and Marsh 1996; Stone 2000) as supplementary explanations for policy outcomes.

Learning can be regarded as an intervening variable, one of many factors. Learning and conditions for learning can provide a deeper understanding of how coherence across multiple governance levels in national and international organizations can be improved (Bernstein and Cashore 2012). Overall, learning is frequently regarded as the facilitating factor for policy outcomes on multiple levels of governance.

So what role does learning play in public policymaking? To answer this central question, I examine how learning occurs in the policy process, how we can analytically differentiate aspects of learning, and under what conditions learning matters to the outcome of the policymaking process. In short, I systematically examine how relevant learning is to governance. The central argument of this book is that we need to better understand the role of learning and to what extent learning can facilitate more effective public policies that help addressing the key challenges of the Anthropocene. Different aspects of learning occur only under certain circumstances. However, learning does not occur automatically as soon as actors communicate or engage in a policymaking process. For example, in order to transmit individual learning to the organizational level of a government department's policy proposal or national negotiation position, and thus achieve a policy outcome, leadership by policy entrepreneurs acting as learning brokers and institutional dynamics are crucial.

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There is no comprehensive theoretical framework on learning that would help answer this question. The link between learning and policy outcomes is rarely systematically questioned in the governance and public policy literature. Although the explanation of learning as a policy process or as a relevant factor for a policy outcome is convenient due to its positive connotation, it does compete with other explanations, such as bargaining in negotiations, political power, various actors' interests, and organizational objectives (Moravcsik 1993; Rietig and Perkins 2018; Roberts and King 1991; Verdini Trejo 2017).

Learning is particularly relevant in challenging policy areas where individual incentives to enjoy short-term benefits are misaligned with the long-term needs of future generations. Addressing a global challenge like climate change first and foremost means reducing greenhouse gas (GHG) emissions while adapting to their unavoidable consequences (IPCC 2018). Several policy instruments are available with the single purpose of reducing emissions, such as carbon taxes, emission trading via financial incentives, and absolute emission caps (Skjærseth and Wettestad 2009; Wettestad 2009). However, it is traditional sectoral policy fields such as transport, energy, industry, and agriculture that will need to integrate climate objectives into their areas in order to achieve emission reductions (Rietig 2013) of over 80 percent from the levels in the 1990s by 2050 (IPCC 2014), with a view toward carbon neutrality in line with keeping global temperature increases below 1.5° to 2°C, as stipulated in the Paris Agreement on Climate Change (Falkner 2016; Meckling 2017). Climate policy integration (CPI) is an emerging area with increasing importance for effective environmental governance that can help countries meet their existing international climate commitments and further increase their ambitions to effectively address climate change (Adelle and Russel 2013; Dupont 2016; Rietig 2013).

In the empirical analysis, I subsequently focus on which aspects of learning emerged and whether learning influenced outcomes in European CPI. The learning process of integrating environmental and climate objectives into sectoral policy areas is seen to provide an important contribution to climate mitigation (e.g., Nilsson and Nilsson 2005; Nilsson and Eckerberg 2007). The EU is a key actor in climate governance due to its strong interest in climate mitigation (Biermann 2005) and its leadership aspirations (Jordan et al. 2010; Schreuers and Tiberghien 2007; Skjærseth 2017). Despite the EU's intentions, its actual leadership on climate change has been more aspirational than factual at times. It has been criticized as deficient (Jordan et al. 2012, 44) following the Copenhagen disaster (Blühdorn 2012) and predominantly resulted in some lesson drawing, such as in the case of

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China (Torney 2015). However, the EU's aspirational leadership role can be regarded as at least partly restored following the strong and successful push for a post-Kyoto regime, with binding commitments from developing countries in exchange for a second and final commitment period of the Kyoto Protocol, which was brokered by the European Commissioner for Climate Action at the United Nations Framework Convention on Climate Change (UNFCCC) negotiations in Durban in 2011 (Rajamani 2012).

This renewed leadership role (Rietig 2020) developed into a lediator role that also incorporates aspects of acting as a mediator between other key GHG emitters such as the United States and China, as well as smaller and least-developing countries that are strongly affected by the consequences of climate change (Elström and Skovgaard 2014). Climate change returned to a high priority in the EU's internal and external policy agenda in 2018 and 2019 in response to the accelerating global climate crisis (IPCC 2018), in the form of unprecedented wildfires in Australia, North America, and Russia; hurricanes in the Caribbean and more recently in the North East Atlantic; and floods, droughts, and crop failures across Europe. This obvious acceleration of the climate crisis resulted in increasing public pressure from social and environmental movements such as Fridays for Future, enticing the European Commission to review its long-term commitments under the Paris Agreement and to propose the European Green Deal to achieve carbon neutrality by 2050.

The rationale for choosing the EU as a geographical focus for this case study has several justifications. First, the international commitments of the EU are more ambitious than those of other major emitters of GHG emissions or served as inspiration. Second, the multilevel governance character of the EU allows gaining insights into and drawing conclusions about how ambitious policies can be transferred to other complex, multilevel political systems outside the EU, as well as implemented among the EU member states (Jordan et al. 2012, 45–46). These semifederalist (Nedergaard 2008, 180; Rozbicka 2013, 844), multilevel governance (Piattoni 2010), and polycentric governance characteristics (van Zeben and Bobic 2019), as well as the aspirations for an international leadership role in global climate governance (Schreuers and Tiberghien 2007; Skjærseth 2017) that are restrained by the EU's inherent structural inflexibility (Afionis 2010), make the EU an ideal test case for learning.

A further rationale for focusing on the EU as a case study area is the rich empirical literature on learning in policymaking within it. There is a certain collective and individual capacity to learn in the polycentric EU (Garben 2019). In particular, the last two decades brought a development of empirical evaluations of learning and the related concept of policy transfer

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(Benson and Jordan 2011; Benson and Jordan 2012) in areas such as Regulatory Impact Assessment (Radaelli 2004; Radaelli 2009), the Common Agricultural Policy (CAP) (Feindt 2010), the Open Method of Coordination (Kerber and Eckardt 2007; Nedergaard 2007), economic governance (Dunlop and Radaelli 2016; Dunlop and Radaelli 2017), employment strategy (Nedergaard 2006a), regional integration (Farrell 2009), and European disintegration (Dunlop, James, and Radaelli 2020). A number of studies focus on agency, such as Elizabeth Bomberg's (2007) analysis of environmental NGOs as teachers in the context of European enlargement and Diane Stone's article on the transfer of policies in transnational governance, including the EU (Stone 2004), as well as Anthony Zito's analysis of agencies as agents for learning (Zito 2009).

The empirical analysis follows a qualitative methodology. The primary data sources are in-depth, semistructured elite interviews with the key individuals involved in the policymaking process. The research presented here is based on seventy-four elite interviews with key actors between March 2012 and August 2018. The interviewees were representatives from the European Commission (Directorate General/Cabinet for Agriculture and Rural Development [DG Agri], Directorate General for Environment [DG Env], Directorate General/Cabinet for Climate Action [DG Clima], and Directorate General/Cabinet Transport and Energy [split into DG Transport and DG Energy in 2010; all later references to DG Energy include the former DG Transport and Energy]), ENGOs, industry lobbyists, and members of the European Parliament (MEPs) and their advisors from conservative, liberal-democrat, green and social-democratic parties, as well as representatives from relevant member states such as Austria, Bulgaria, Finland, Germany, Hungary, Italy, the Netherlands, Portugal, Spain, Sweden, and the United Kingdom (UK). In addition to interviews providing primary sources, I analyzed all relevant and available document-based sources and gray literature, including white/green papers, draft communications between the European institutions, published accounts of individuals involved in the decision-making processes of the case study policies, and policy outcomes in the form of directives and regulation. The interviews referenced in this book are listed in Appendix 2 formatted as, for example, EC 1, whereby EC stands for European Commission followed by the anonymized numerical designation of the interviewee (see Appendix 2).

In chapter 2, I present the Learning in Governance Framework (LGF), which is based on reviewing and synthesizing the learning literature across political science, social psychology, and management studies spanning more than fifty years. This is particularly useful for further empirical

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analysis of learning in any policy field or geographical context, as the literature on learning is dominated by overlapping terminology and thus remains ambiguous on what can (and cannot) be regarded as learning. Chapter 2 also discusses the methodological aspects of data collection and data analysis to allow for applying and further developing the LGF with other levels of governance, in other sectoral policies, or both. One example is the assessment of the role of learning when arriving at the Paris Agreement in 2015 (Rietig 2019b), with a focus on the global level of international negotiations.

Chapter 3 briefly introduces the policymaking process in the EU and conceptualizes CPI as a background for evaluating the role of learning in the subsequent chapters: the Renewable Energy Directive (RED) with the biofuels controversy (chapter 4), the greening of the CAP in the 1980s and 1990s (chapter 5), and more recent reforms in the 2000s and 2010s (chapter 6). The key findings point toward a very nuanced role for learning and its interplay with leadership by policy entrepreneurs (discussed in chapter 7), showing that the policymaking process was at times dominated by bargaining among the actors based on their organizations' interests. So-called normal aspects of learning occurred frequently, such as gains in experience and knowledge, which could be expected in any policymaking process. In several instances, the policy outcome was more a result of policy entrepreneurs using their previously acquired knowledge and experience to achieve a policy outcome that aligned with their preformed deeper beliefs and policy objectives. Finally, chapter 8 provides a synthesis of the findings and original contributions to the earth system governance and European public policy literature before offering an outlook on implications for practice in the EU, as well as for the learning literature.

This research makes several original contributions to the agency aspects of Earth System Governance in the Anthropocene (Biermann 2014): the LGF allows a more nuanced analysis of which aspects of learning occur in governance processes and how they matter to governance outcomes. It furthermore allows more precision in determining the extent to which a policy outcome results from learning or other explanations. I clarify the underresearched link between the learning individual and the factors that hinder learning from being transferred to the organizational level, where most policy decisions are made, and the policy outcome. In addition, the CAP and RED case studies allow a fresh perspective on the key role of bureaucrats as policy entrepreneurs and learning brokers.

Overall, learning does matter to governance as an intervening variable and can affect the policy outcome in combination with dedicated leadership by policy entrepreneurs. The effectiveness of governance can be improved

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by aligning actors' beliefs to both address climate change and meet sectoral policy objectives, mastering strategies that are most suitable for influencing the governance process, strategically creating or using windows of opportunity, and particularly using existing experience and knowledge to act as policy entrepreneurs by proactively steering policy proposals through the policymaking process toward its outcome, while avoiding institutional and political veto points.

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2 The Learning in Governance Framework

We currently lack the analytical toolset to identify and evaluate how learning among individuals is linked with learning on the collective level of policymaking and how this learning can influence policy change. In this chapter, I first identify exactly what learning means in the policymaking context. I then proceed to evaluate central outputs of the existing literature on policy learning across political science, management studies, and psychology by categorizing the literature into a learning continuum. This serves as the basis for presenting the Learning in Governance Framework (LGF), which facilitates the analysis of learning in policymaking processes and allows for determining the extent to which learning influenced policy outcomes.

A diverse range of learning frameworks emerged in the 1990s in public policy scholarship. Authors use different labels for a multitude of learning types, which frequently overlap; as a result, the literature has become confusing, widely imprecise, and indistinguishable in terms of what aspect of learning is examined on what level of governance (Rietig and Perkins 2018). To remedy this confusion in the literature—instead of perpetuating it with yet another label for learning or by following one of the existing yet imprecise labels—my synthesis deliberately goes back to basics by drawing upon the original theories. I do not attempt to provide a complete overview of the more recent, diverse, and numerous further developments and applications of these theories to empirical cases, as this would be beyond the scope and purpose of this book (for that, see e.g., Radaelli and Dunlop 2013; Vagionaki and Trein 2019).

Several disciplines are concerned with the question of learning among policymakers. Policy learning in political science predominantly examines how learning can be used as a tool to improve governance procedures involving various actors and the extent to which learning matters for policy outcomes (for key contributions, see Cashore et al. 2019; Dunlop and Radaelli 2013; Dunlop, Radaelli, and Trein 2018; Dunlop and Radaelli 2020;

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Heikkila and Gerlak 2013; May 1992; Radaelli 2009; Sabatier 1987; Zito and Schout 2009). The international relations literature links changes in beliefs to learning (Haas and Haas 1995; Modelski 1990; Nye 1987). The field of management studies is predominantly interested in the question of how an organization can improve its learning to optimize its performance; this overlaps with social psychology, which is concerned with the question of how individuals and organizations learn or do not learn in a certain context. This is referred to as organizational learning (Argyris 1976; Argyris and Schön 1978; Easterby-Smith and Lyles 2005; March and Olsen 1975). A related further strand of learning is nonlearning—that is, when actors avoid engaging with a problem in a meaningful way that might result in learning (Janis 1972; Janis and Mann 1977).

What Does Learning Mean in a Policymaking and Governance Context?

When several state and nonnational actors are involved in the exchange of knowledge about past experiences in a public policy setting, the overall term used to describe this phenomenon is policy learning. Policy learning is frequently regarded as an aspect of the wider concept of policy diffusion, which is split into policy transfer (Page 2000) and policy learning with the overlapping concept of lesson drawing (Evans 2004, 2006; Rose 1991). Lesson drawing focuses on learning from experience regarding past mistakes and successes, while policy transfer refers to copying policies from other countries or levels of governance and adapting them to similar domestic circumstances (Asare and Studlar 2009; Dolowitz and Marsh 2000, 2012; James and Lodge 2003). Also related is the concept of political/strategic and instrumental learning, which focuses on how individuals and organizations learn to better navigate politics and how to use regulatory instruments to achieve their objectives (e.g., May 1992; Radaelli 2009). Another stream of policy learning literature is concerned with changes in beliefs, either as a wider sociopolitical phenomenon or among individual policymakers and in their governmental institutions (Haas and Haas 1995; Keohane and Nye 1987). This literature evolves around social learning among policymakers in policy and knowledge networks that are capable of changing underlying beliefs (Nye 1987; Sabatier 1988), as well as learning in the process of implementing policy (Nilsson and Eckerberg 2007).

The term learning carries different meanings and connotations, depending on the context in which it is used. I expand on the trend in the political science literature to widen the focus toward the rich and well-developed organizational learning literature (see also Dunlop 2010; Gerlak and Heikkila

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2011; Koch and Lindenthal 2011; Zito and Schout 2009). Learning is frequently defined as the acquisition of skills and knowledge (or action and thought); it thereby carries the components of skills as know-how, or the physical ability to act, and of knowledge as know-why, or the ability to communicate the understanding of an experience (Kim 1993, 38). Learning can further be seen as acting on experiences and correcting errors. Argyris's widely accepted definition explains learning as "the detection and correction of errors, and error as any feature of knowledge or of knowing that makes action ineffective. Error is a mismatch: a condition of learning, and matching a second condition of learning. The detection and correction of error produce learning and the lack of either or both inhibits learning" (1976, 365).

Learning can also be defined as a reaction to perceived stimuli, when it is a "relatively enduring alteration in behavior that results from experience; usually, this alteration is conceptualized as a change in response made in reaction to some perceived stimulus" (Heclo 1974, 306). This experiential learning–focused definition, which applies to both individuals and organizations, was picked up by Gerlak and Heikkila (2011, 623) in their theoretical framework on factual and experiential learning of collectives: "Collective learning involves both (1) a 'collective process,' which may include acquiring new knowledge through diverse actions (e.g., trial and error), assessing information and disseminating new knowledge or opportunities across individuals in a collective, and (2) 'collective products' that emerge from the process, such as new shared ideas, strategies, rules, or policies."

The definition provided by Kim (1993, 38) contains conceptual traces toward action and understanding; and the second definition, by Argyris (1976), emphasizes experience and correction of errors. The definitions by Heclo (1974) and by Gerlak and Heikkila (2011) both focus on learning facts and reflecting on experience within a group of individuals, whereby the latter also includes the outcome of a learning process. As there are many kinds of learning in the distinctive disciplines and subareas, subdisciplines provide different definitions and understandings of what learning is, depending on the analytical context. The policy diffusion literature also understands learning as a central part of policies becoming more similar over time. This outcome-focused perspective understands learning as

> the process of observing a policy model from another country or the own past by political decision-makers, who want to improve the status quo for personal or idealistic reasons by choosing a rational model. Thereby their individual cognitive resources, but also institutional rules and political interests, restrict them. At the same time, they are able to profit from the capacity of information processing of bureaucratic organizations. Observing a policy model results in voluntary

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> imitation or convergence with a relatively stable change of current policy. (Sommerer 2011, 40–41; translated from German by the author)

Sommerer's definition is useful, as it is focused on actors and capabilities of political decision-makers striving to improve the status quo for personal or idealistic reasons by choosing a rational model and being restricted by their individual cognitive resources, institutional rules, and political interests (Sommerer 2011, 40). However, not only do political decision-makers learn in public policy, but so do civil servants, and for learning to occur in democratic policymaking, so does the unit or government department that they are working for, and potentially wider society as well. Furthermore, learning does not necessarily occur when another policy model is being observed, which again must not necessarily lead to voluntary imitation or policy convergence. Policies can have other sources than learning, such as necessity, legislative pressure via international agreements, or coincidence with countries deciding on policies without knowing that similar policies already exist in other countries.

Learning can occur on both the individual and the organizational level. Learning on the organizational level holds the paradox that it encompasses more than the learning experienced by individuals, but it happens through the actions and experiences of the individuals within the organization (Argyris and Schön 1978, 9). Deliberate action has a cognitive basis reflecting the strategies, norms, and assumptions of the individual's world and constitutes a theory-in-use, the way that an individual acts in a given situation. This, however, is not necessarily the same as theory-in-action, which refers to a behavior that the individual communicates as its principled course of action (Argyris and Schön 1978, 6–11). Within an organization, individuals construct their own but incomplete image of the overall theory-in-use.

The learning literature differentiates among single-, double-, and triple-loop learning. Central elements of single-loop learning are unchanged norms and the objective of error elimination by developing new strategies to solve the problem; however, in order for learning among individuals to move to the organization, the evaluations need to be transferred to organizational memory (Argyris and Schön 1978, 19–20). While the single-loop learning process and error detection and correction depict individual or nonindividual/social perspectives of cognitive learning, Argyris and Schön introduce double-loop learning. This becomes especially relevant when the correction of errors cannot be achieved through simply raising the effectiveness (as with single-loop learning), but the norms defining effective performance must be reconsidered and altered (Argyris and Schön 1978, 21–22). In sum, double-loop learning means "those sorts of organizational

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inquiry which resolve incompatible organizational norms by setting new priorities and weighting of norms, or by restructuring the norms themselves together with associated strategies and assumptions" (Argyris and Schön 1978, 24). A third level of learning within organizations is deutero-learning, or triple-loop learning (Argyris and Schön 1978, 26). It occurs when individuals reflect on the experienced contexts for learning or failing to learn, thereby evaluating current strategies and coming up with new strategies for learning. As this learning process is being encoded in previously introduced individual images, it can also be reflected in the learning practice of an organization (Argyris and Schön 1978, 27–28).

It is important to recognize that learning does not automatically exist in a policymaking process. It requires the individual and organization to reflect on knowledge- or experience-based input. If this reflection does not happen, no learning occurs. Instead, we are looking at nonlearning as the opposite of learning. This includes not reflecting on an input and thus entering a process of defensive avoidance (Rietig 2018a), forgetting about previously acquired knowledge, reactive governing, simply muddling through the process toward an outcome, and unlearning, as well as state-centered explanations for policy change and power (e.g., see Baumgartner 2007; Klüver 2013; May 1992; Moravcsik 1993). Unlearning can be either unconscious or intentional; it indicates knowledge that an individual forgot or an organization lost, such as when an expert changed jobs or retired (Janis and Mann 1977). The following definition consolidates the diverse understandings of the learning literature and provides an overall conceptual basis to the analysis.

For learning to occur, the following must take place:

> (1) a *reflection and judgment* based on an input, experience or detection of error, which leads the individual to select a different view on (2) how things happen, i.e., the acquisition of knowledge or learning facts and (3) what course of action to take, i.e., the reflection on individual or collective experience or advice from others on such previous experiences. (Rietig and Perkins 2018, 491)

The Learning Continuum

Each learning definition examined in the previous section covers different aspects, levels, and stages of the policymaking process, but none provides a comprehensive frame that allows for analyzing the learning of individuals within a larger group or organization. There have been attempts to address aspects of the criticisms brought forward by Keohane and Nye (1987) on the shortcomings of the learning literature, which were later reconfirmed by

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Radaelli (2009). Few contributions on theoretical frameworks succeeded at addressing key shortcomings of the literature, such as differentiating learning from other explanations for policy changes, mistaking learning for lip service or defensive avoidance, setting learning and policy change equal, and not separating different aspects of collective learning (Levy 1994, 282). Consequently, I categorize the existing learning conceptualizations into a learning continuum. The policy learning literature within political science has the highest relevance for determining and detecting learning among decision-makers in policymaking and governance, as it emphasizes the central importance of networks among various actors in policymaking as a new form of governance (Eberlein and Kerwer 2004), the change in underlying beliefs by engaging in coalitions for policymaking (Sabatier 1987), and policy entrepreneurs (Mintrom 2013; Roberts and King 1991).

Although the policy learning literature is very good at pointing out the existence of learning processes in policymaking and possible underlying factors, it falls short of providing an answer to the question of exactly how this learning happens. Furthermore, the policy learning literature points toward the role of epistemic communities and experts as agents of change with an influence on the policymaking process (Haas 1992; Zito 2001; Zito 2009) and links them with policy entrepreneurs (Braun 2009; Mintrom 2013), but it does not systematically integrate those aspects into one coherent theoretical framework for policy learning. With a few notable exceptions (e.g., Dunlop 2009; Keohane and Nye 1987; Nye 1987; Radaelli 2009; Zito and Schout 2009), there is also a gap in the policy learning literature regarding the link of learning processes occurring on the individual and organizational levels.

The diverse bodies of learning literature discussed here do have commonalities that point toward a larger set of factors that influence how decision-makers learn. Consequently, they can be placed on a learning continuum of two major characteristics. First, the learning continuum distinguishes *who learns*. Contributions to the literature can be placed on a continuum between individual learning and collective learning, while some contributions expand to the link between the learning of an individual and how the learning result is transmitted to the broader community of that individual (e.g., the organization or a network of governmental, nonnational, or transnational actors).

Second, the learning continuum distinguishes among three modes of learning that overlap in some learning theories and concepts. Learning occurs when there is a positive change (i.e., an increase in the knowledge base of an individual or an organization initiated by an internal or external

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informational input that can lead to the development of certain skills). The most dominant mode of learning is by doing—that is, *experiential learning* that is based on drawing lessons from an experience (Argyris and Schön 1978). Individuals and organizations can also arrive at *constructivist learning* when they change their underlying beliefs based on an experience or increase in knowledge and thereby come to see the situation differently (Haas and Haas 1995; Nye 1987), which in turn leads to a more informed and reflected reaction. Figure 2.1 provides an overview of the major bodies of learning literature, including conceptual frameworks on learning. These bodies of literature can be situated on the learning continuum along the individual or collective (organizational and sociopolitical) dimension. The other dimension is the mode of learning (i.e., an increase in knowledge, experience, or a change in underlying beliefs).

Cognitive learning theories and concepts are predominantly situated on the dimension of individual learning with an increase in knowledge and, in the case of the experiential learning cycles, an increase in experience. The organizational learning literature frequently links the individual with the organizational (i.e., collective) dimension of learning and focuses on how individual learning experiences are transferred to the larger organization based on experiences and/or changes in underlying beliefs, thus also introducing a constructivist element. The policy learning literature is predominantly concerned with collective learning among institutions involved in policymaking. It is furthermore interested in how individuals within their networks react to changed outside conditions and adapt policies from other levels of horizontal or vertical policymaking. The nonlearning literature can be situated either on the individual level, where individuals fail to reflect on new information (defensive avoidance), or on the collective level, where decision-makers refuse to take into account new knowledge (groupthink). Figure 2.1 provides an overview of the learning continuum.

Epistemological Assumptions of the Learning in Governance Framework

The basic assumptions underpinning the LGF can be situated within the perspective of new institutionalism and wider implicit institutionalist approaches in the international relations literature (e.g., Bernstein and Cashore 2012). The LGF relates to European multilevel governance (Jordan 2001; Hooghe and Marks 2003; Marks and Hooghe 2001) and polycentric governance (Ostrom 2010a; van Zeben and Bobic 2019) when it acknowledges diffuse power and multiple entry points for actors and holds the basic assumption of rational actors trying to achieve their political objectives.

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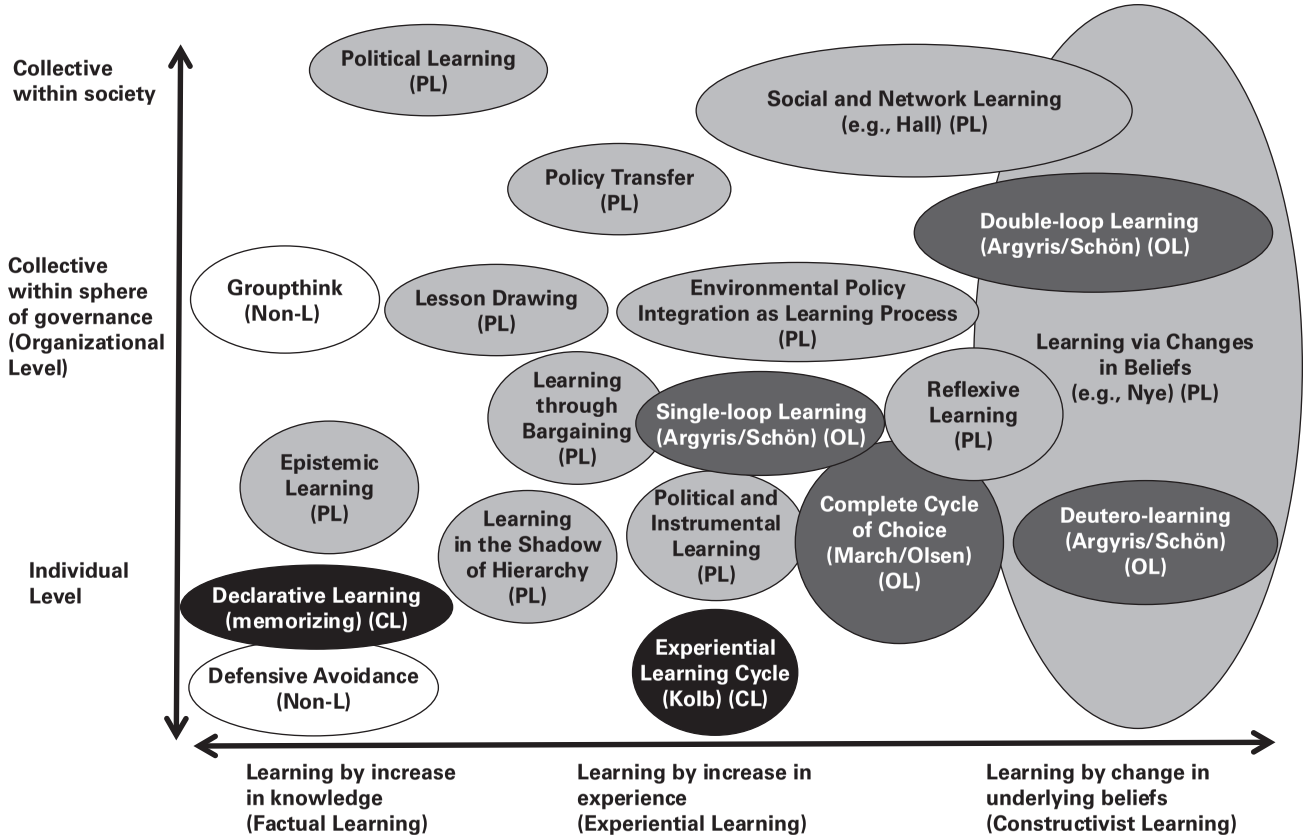
Collective within society
Collective within sphere of governance (Organizational Level)
Individual Level
Political Learning (PL)
Social and Network Learning (e.g., Hall) (PL)
Policy Transfer (PL)
Double-loop Learning (Argyris/Schön) (OL)
Groupthink (Non-L)
Lesson Drawing (PL)
Environmental Policy Integration as Learning Process (PL)
Learning via Changes in Beliefs (e.g., Nye) (PL)
Learning through Bargaining (PL)
Single-loop Learning (Argyris/Schön) (OL)
Reflexive Learning (PL)
Epistemic Learning (PL)
Learning in the Shadow of Hierarchy (PL)
Political and Instrumental Learning (PL)
Complete Cycle of Choice (March/Olsen) (OL)
Deutero-learning (Argyris/Schön) (OL)
Declarative Learning (memorizing) (CL)
Defensive Avoidance (Non-L)
Experiential Learning Cycle (Kolb) (CL)
Learning by increase in knowledge (Factual Learning)
Learning by increase in experience (Experiential Learning)
Learning by change in underlying beliefs (Constructivist Learning)

Figure 2.1

Categorization of major learning frameworks within the learning continuum. CL= Cognitive learning; PL=Policy learning; OL=Organizational learning; Non-L=Nonlearning.

These objectives can be based on the goals of the actor's institution; the existence of shared beliefs that guide the actor's behavior and political preferences; a pluralist decision-making arena with multiple interests, actors, and levels of governance; and the opportunity for individuals to take on active roles in influencing the governance architecture of the institution, its objectives, and its policy outcomes. Most of these assumptions are mirrored by the institutionalist literature (Bell 2011; March and Olsen 1984). It does explicitly refrain from taking a normative approach to making value judgments of how policymaking *ought* to be—it only examines how and why policymaking works the way it does and to what extent the intervening variable of learning matters. It examines learning within the policymaking process (i.e., lawmaking) that takes place within the interaction of governmental institutions. The research questions thus focus on the interplay of actors and institutions, not the normative implications of the interplay. Once learning is identified and its influence on a policy process or outcome is established, a normative discussion using critical theory approaches may be useful to debate whether this influence is good or bad for certain actors or the achievement of certain objectives.

The LGF presented here draws on aspects of two theoretical frameworks of the policymaking process to more accurately analyze the empirical findings on the factors that facilitate or hinder learning. It is intended as a stand-alone framework that borrows empirically proven concepts from existing frameworks and thus takes a similar approach as Sabatier to the Advocacy Coalition Framework (ACF) (Sabatier 1987; Sabatier 1988) and Kingdon to the Multiple Streams Framework (MSF) (Kingdon 1995). In this section, I explain the epistemological and theoretical choices made by following the analytical framework presented by Capano (2009). I understand the choices as being different options along a scale, not as a binary of either or. Public policy is seen from an output perspective in the form of a piece of hard or soft legislation (for definitions, see Abbott and Snidal 2000) that has been negotiated by different governmental and nonnational actors on one level or across multiple levels of governance. Policy change is the difference between the status quo at a certain time and the progress compared to the status quo at a later time, whereby this also includes policy stability: an example of such a policy change would be the difference between the outcome documents of the negotiations within the UNFCCC between 1997 and 2015 (e.g., the Kyoto Protocol and the Paris Agreement).

The LGF's basic epistemological choices relate to the ideal type of the policy's life cycle (Capano 2009, 10): it assumes that there is a driver for policy change, such as a policy problem that requires a response in the form of a

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policy outcome. This can be compared to a key metaphor of organic growth with a prefigured sequence containing a relatively linear progression of events based on institutional rules (Capano 2009). For example, the legislative process embedded in treaties regarding the functioning of a political system has a linear nature, with a sequence of events and involvement of various actors at each stage (e.g., Craig 2010; Weidenfeld 2006) based on a constitution or similar treaty. Thus, the motors of change propel along a process of policymaking resembling the prefigured program. Institutions regulate this process of policymaking, whereby the outcome of the change also contains a certain level of irreversibility (Capano 2009, 10), given that each existing piece of legislation benefits certain actors who form vested interests. These in turn result in a lock-in effect into a continued existence, making nonincremental change unlikely. The dynamics of policy development are rather evolutionary, with incremental changes in reform processes that are initiated as a result of reflection on previously existing policies. It is important to acknowledge that not all policy cycles and policy- or decision-making processes follow a linear approach—the reality of policymaking is much messier, with different ideal stages being skipped, merged, or revisited. This means that any empirical analysis needs to establish the actual and not the ideal timeline and progression of the policy- or decision-making process of interest.

The LGF takes a co-evolutive perspective while linking the macro- and micro-levels (Capano 2009). This is useful, as it allows us to understand microfactors such as learning and the influence of individual policy entrepreneurs, but also to take wider developments on the macro-level within the sociopolitical landscape into account. Methodologically, the framework requires a coevolution approach in the form of process-tracing the development of a decision-making or policy process from its origins (i.e., the driver for policy change) to its outcome in order to be able to pinpoint the microprocesses of learning at various stages (Deters 2013). This is important, as learning is not evenly distributed across the stages of the policy- or decision-making process. The structure/agency dilemma (Capano 2009, 16) is addressed via the linkage between the individual level and the organizational level of learning, as well as possible alternative explanations to learning. The process-tracing methodology suggested for the empirical analysis is based on a combinative causality that takes into account the interdependence of levels on which learning occurs and alternative explanations to policy change. The key explanatory variables are policy entrepreneurs, organizational hindering factors, political interests, and changes in the sociopolitical landscape.

Table 2.1 compares the epistemological and theoretical choices of the ACF, MSF, and LGF and thus makes their differing underlying assumptions clear.

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Table 2.1
Epistemological and theoretical choices in the ACF, MSF, and LGF

	MSF	ACF	LGF
Epistemological Choices			
Way of event progression	Nonlinearity (ambiguous and unpredictable)	Linearity (partially predictable)	Linearity (from driver to address policy problem to policy outcome such as in the form of legislation)
Motors for policy change	Partially constrained chance and entrepreneurship	External factors, partisan change, confrontation, learning	External factors (changes in the sociopolitical landscape) and internal factors (learning, policy entrepreneurship)
Theoretical Choices			
Definition of policy development and change	Particularly focused on agenda setting, no distinction among different types of policy change	Covering the entire process, tripartition of content of changes (based on a tripartition of policy beliefs)	Covering the entire policymaking process, takes previous policies into account (reform processes), focuses on learning
Output of change (policy)	Not prefigured	Reversible	Limited reversibility due to lock-in effects over time
Level of abstraction	Coevolutive perspective	Linking macro-, meso-, and micro-levels	Coevolutive perspective while linking macro- and micro-levels within the meso-level of a policy subsystem (effect of the sociopolitical landscape on learning on the organizational and individual levels)
Structure-agency dilemma	Structural prevalence, but with room for individualistic strategic behavior	Constantly linking structure and agency	Linking structure and agency: individuals and actors learn, but policy outcome is also determined by institutional structure and other factors

(*continued*)

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Table 2.1 (continued)
Epistemological and theoretical choices in the ACF, MSF, and LGF

	MSF	ACF	LGF
Causal mechanisms	Random combinative causality mixing exogenous and endogenous variables, but exogenous ones seem prevalent	Combinative causality—the composition of which depends on the type of change; major changes are exogenously determined	Combinative causality, interdependence of learning levels and alternative explanations to policy change
Explanatory variables for policy change	Critical external events (technological change, electoral victory, systemic or international crisis) plus the eventual role of single individuals	Critical events, ideas, and beliefs; competition; learning	Policy entrepreneurs, learning, organizational hindering factors, political interests, changes in the sociopolitical landscape
Configurative dimensions	Semichaotic mix of three dimensions (policy as an arena of power, an ideational forum, and a target of influence by political institutions)	Focused on the interaction of three configurative dimensions: policy as an arena of power, as a set of networks, and as an ideational forum	Policy as an institution (law, rule, norm)

Source: Capano (2009, 20–21) on MSF/ACF, author on LGF.

It also summarizes the epistemological and theoretical assumptions of the LGF to identify learning in policymaking, which is important in order to understand "the viewpoint to be taken when considering reality" (Capano 2009, 11), and to allow reproducibility by applying the framework in an empirical context, while also taking into account the fit with basic assumptions to make informed choices about its applicability and limitations (King, Keohane, and Verba 1994).

Learning in the Policymaking Process

In the LGF, learning on the individual and/or organizational level is an intervening variable, with the driver for policy change being the independent variable and the policy output the dependent variable. Other explanations for policy change are a further intervening variable that can also lead to the policy outcome. Learning processes can occur on the individual and/or collective level (which includes the organizational level and the sociopolitical landscape). A driver for policy change initiates the policymaking process that can include learning. A policy outcome emerges either as the result of learning or of other explanations that were independent of whether learning among individuals or on the organizational level occurred. Figure 2.2 provides an overview of learning in the policymaking process, which starts with a driver for policy change such as a policy problem (independent variable) and ends with a policy outcome (dependent variable). The following sections examine the key elements of the LGF in detail.

Driver for Policy Change (Independent Variable)

There are a number of drivers for policy change that can initiate learning among the individuals and organizations involved in the policymaking process. The underlying assumptions of this framework are based on analytical frameworks of the policy process that conceptualize policymaking embedded in a wider continuum of interests, choices, actors, and influential external factors with rational actors. It also assumes multiple places of entry and exit without one centralized decision-maker, but rather a multitude of actors and levels that interact and influence the policy process at different times and stages. These basic assumptions are shared with Kingdon's MSF (Kingdon 1995; Zahariadis 2007), which provides a powerful explanation of agenda setting and how different problems, the wider public mood, external shocks, and changes in political leadership influence policymaking.

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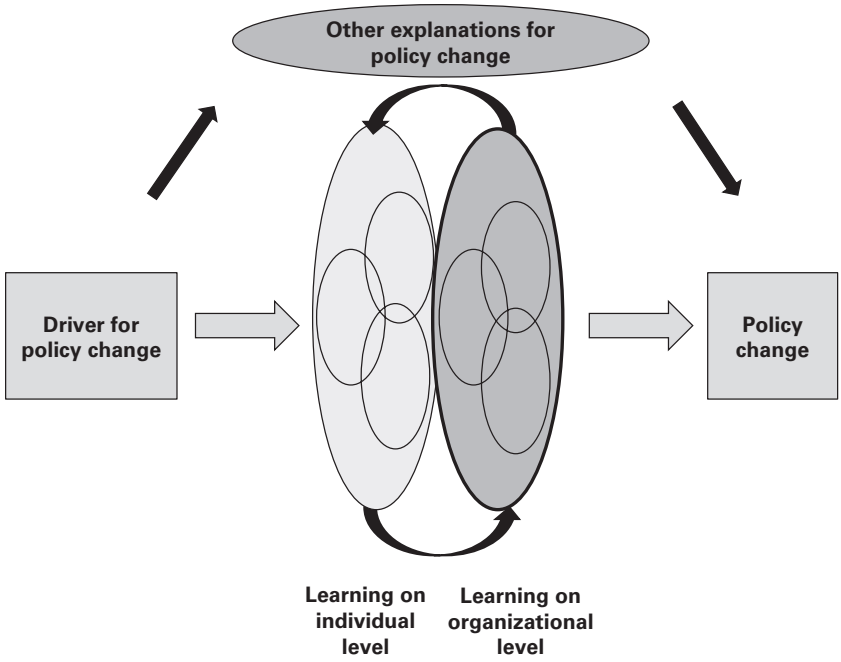

Figure 2.2
Learning in the policymaking process. Compiled by author.

Two key assumptions are that policymaking happens in an environment of "organized anarchy" (Ackrill, Kay, and Zahariadis 2013, 871) and that the solutions to the problems already exist in theory, but as yet there has been no opportunity for them to be translated into policies (Kingdon 1995). Empirically, the MSF can be applied to federal and semifederal political systems such as those of the United States and the EU (Kingdon 1995; Zahariadis and Allen 1995).

The MSF emphasizes the existence of wider societal demands in the form of a problem stream and agency with the role of policy entrepreneurs using windows of opportunity (Kingdon 1995). There are three independent, parallel streams in the policy primeval soup that contains policy communities. This is based on the garbage can model on organizations as organized anarchies introduced by Cohen, March, and Olsen (1972), with the assumption that policymaking is a chaotic, complex process and occurs when the three parallel streams of problems, politics, and policies join in a window of opportunity that is seized by policy entrepreneurs. The problem stream consists of different issues and policy problems wider society

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and policymakers are concerned with (Jones et al. 2016). Together with the political stream, it served as inspiration for the sociopolitical landscape used in the LGF. Kingdon's problem stream contains more conditions and stages, such as the shift from a situation (e.g., poverty or climate change) that exists independent of policymaking to a problem when individuals in policymaking come to believe that they need to address it (Kingdon 1995). The definition of the problem is further influenced by the values of the actors involved, comparative and distributive aspects, and in particular which category a situation is attributed to, such as whether renewable energy policy is seen as an energy policy serving the objective of energy security and economic growth, or whether it is seen as climate change mitigation. Thus, if society and policymakers care about an issue (or situation) and thus regard it as a problem, it is more likely to enter agenda setting, and ultimately the policymaking process.

Two further streams are equally important: the politics stream and the policy stream. The politics stream is characterized by pressure group campaigns, party ideology, and the national mood. The national mood is especially relevant to policymakers, as it reflects wider societal demands and the thinking of a large number of individuals along common lines, which changes over time. Other factors of relevance in the political stream are personnel turnover as the result of elections or administrative changes, as the new individuals are likely to hold different ideological beliefs, particularly if they are from opposing political parties (Zahariadis 2007, 73).

The policy stream contains a large number of potential solutions in the form of policy proposals that are favored by various actors who have been waiting to attach their solutions once a problem presents an opportunity to do so. The technical feasibility, acceptability of underlying values, and anticipation of future constraints determine which solution emerges. As a few leading ideas become more prominent, they are discussed more frequently and taken more seriously so that ultimately a consensus emerges among the policy experts, such as civil servants and epistemic communities (Kingdon 1995, 140–41).

Changes in the problem, the politics stream, or both can open a window of opportunity. Policy entrepreneurs can use this window to couple the three streams to launch the policy proposal that was waiting to be attached to a particular problem and push it through the decision-making process (Jones et al. 2016). In particular, changes in the national mood, external shock events, scheduled reforms, or changes in political leadership open these windows of opportunity (Kingdon 1995, 165–69).

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A particular aspect of the problem stream is dissatisfaction with the status quo, especially if bureaucrats initiate the policy proposals (Kingdon 1995). Such dissatisfaction can be a driver for learning during the policy process, as policymakers often have no incentive to change established administrative routines or strive for policy change (Rose 1991). This does not contradict the idea of coexisting drivers for policy change along problem, policy, and political streams waiting for their window of opportunity to open. Actors aspiring change can establish dissatisfaction by illustrating that there is a gap between the status quo and possible gains—that is, a future status quo (Rose 1991, 1993).

Reasons for this dissatisfaction can include uncertainty among policymakers based on the complexity of an increasing number of policy programs, changes in the policy environment leading to negative effects even though the policy program remained unchanged, shifts in political values, and the threat of sanctions to policymakers unless they adjust insufficient policy programs (Rose 1991, 11–13). A crucial precondition for learning is that the policymaker reflects on available information and solving the problem is in the policymaker's interest. Not only rational interest, but especially the individual's beliefs, determine the preferences and cognitions of the problem—in short, how the policymaker sees and understands it.

Learning Typology—How Learning Can Be Identified

There are three key elements to learning. Learning happens when individuals find themselves exposed to some kind of external stimulus and subsequently reflect on the new experience or knowledge. *Factual learning* refers to receiving and cognitively processing new knowledge, which then subsequently adds to the existing stock of knowledge (Argyris and Schön 1978). Depending on the formation of cognitive links to existing knowledge and the revision and use of information processing modes such as visualizing, hearing, discussing, or feeling, the knowledge is stored in memory and can be retrieved if required, as discussed by the cognitive/educational learning literature (e.g., Hay 2007). Factual learning in the context of policymaking refers to additional knowledge about facts underpinning the policy area or the functioning and effectiveness of specific policy instruments. The individual or organization needs to reflect on one or more information sources, such as briefings by experts from within and outside (e.g., their government department, research findings, and media articles).

The second type of learning, *experiential learning*, emerges when individuals or organizations are involved in a policymaking process and subsequently reflect on this experience and add to their skill set. Experiential

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learning refers to the ability to reflect on working experience accumulated over a certain time frame. A key aspect of this type of learning in a policy setting is achieving better understanding and becoming more skilled at employing various tactics and strategies to influence the process and outcomes around particular policies or governance mechanisms. This is a well-known approach that has received different labels in the literature, such as political learning (May 1992; Radaelli 2009), policy-oriented learning (Sabatier 1987), as well as single-loop and double-loop learning in relation to detecting and eliminating errors (Argyris and Schön 1978). Individuals and organizations either adapt their current actions based on their previous experiences in the form of learning by doing (i.e., single-loop learning; Argyris 1976) or they also adapt their objectives following their reflection on past experiences with single-loop learning (i.e., double-loop learning; Argyris 1976; Dunlop 2010). Both forms of learning can occur together when the individual or organization gains knowledge about an issue by experiencing it in practice (see March and Olsen 1975).

Constructivist learning occurs when individuals or organizations change their underlying beliefs and subsequently arrive at a different point of view (Nye 1987). Based on Sabatier (1988) and Hall (1993), as well as further developments by Jachtenfuchs (1996) and Farrell (2009), four types of beliefs can be differentiated, depending on their stability and what they refer to. Beliefs are defined as the normative understanding of how things ought to be and/or overall worldviews held by a person or organization and can imply changing or maintaining the status quo (Rietig 2018a, 54). This definition is close to the understanding of beliefs expressed by Sabatier (1988). There are four aspects of constructivist learning, depending on which beliefs change. Deep-core beliefs (Sabatier 1988) refer to very fundamental worldviews and values that are extremely stable and very rarely subject to change. These include, for example, whether a person has a conservative or leftist political leaning and fundamental views on the role of the state and its legitimacy to limit individual freedom. These very fundamental, deep, core beliefs are very stable and not subject to change.

The additional aspect not mentioned by Sabatier (1988) and later publications (e.g., Weible et al. 2011a, 2011b) are deeper beliefs, such as realizing that climate change or poverty are important problems. Individuals or organizations form these deeper beliefs at some point in time, usually when they are confronted with information that makes them adopt their viewpoint. These deeper beliefs are an important factor in self-sustaining and self-reinforcing policymaking dynamics, as they change individual and organizational objectives and create a desire within the individual or

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organization to contribute to a solution that uses the means and competencies available. Learning in the area of deeper beliefs occurs when individuals or organizations form an understanding that a societal or environmental challenge exists and requires a solution. These beliefs thus facilitate the development of a new or changed objective within an individual or organization and can lead to action or a realignment of less stable and more action-oriented beliefs.

Policy design beliefs are inspired by the conceptualization of Sabatier (1988). They refer to an individual or organization's view of what overall direction a policy should take, such as the choice of wider policy instruments. For example, a policy design belief would be an individual's perspective on whether the agricultural sector should receive European subsidies or whether renewable energies such as biofuels are an appropriate means to mitigate climate change.

Exactly how these policy instruments should be designed and implemented falls into the category of policy detail beliefs, which are related to secondary beliefs described by Sabatier (1988). These refer, for example, to views on how high the share of first-generation biofuels in the energy mix should be, or whether European agricultural subsidies should depend on environmental services and farmers' compliance with environmental standards.

Both policy design and policy detail beliefs are less stable than deeper beliefs, and they are more easily subject to change. If an individual or organization reflects on information and as a result changes deeper, policy design, or policy detail beliefs, constructivist learning occurs. To identify such learning, it is important to compare the individual's or organization's beliefs at the end of the examined time frame to the beliefs at the beginning of the time frame (Radaelli 2009; Sabatier 1988). Figure 2.3 illustrates the typology of learning among policymakers, including showing factual learning, with its increase in knowledge; experiential learning, with the additional experience; and constructivist learning, with a change in underlying beliefs. Identifying a change in each of these areas means that learning has occurred, whereby they can also overlap with each other and thus exist simultaneously. Both the additional knowledge and experience can overlap with a change in the underlying beliefs.

There are several factors, internal and external, to the policymaker's organization or personal way of dealing with a situation that can hinder learning. Even if learning occurs on the individual level, it is not automatically transferred to the organizational level and ultimately into the policy outcome. Although there was stimulation toward increased knowledge, experience, or changed beliefs encouraging reflection, the policymaker might not

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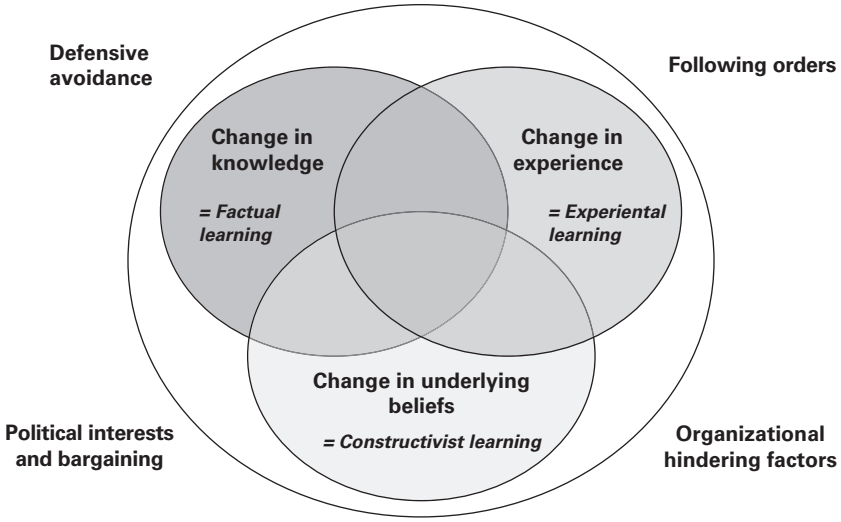

Figure 2.3
Learning typology (change in knowledge, experience, or beliefs) and other explanations of learning for policy change.

experience that change. Instead, the policymaker is preoccupied with organizational hindering factors such as faulty leadership or time pressure, with political interests or defensive avoidance, or else they are simply following orders (Janis 1972; Janis and Mann 1977). If individuals did not reflect on input but a policy outcome nevertheless emerged, this points toward alternative explanations. Consequently, the key to determining whether learning occurred is to establish whether the individual decision-maker reflected on the new information and as a consequence changed beliefs or gained new expertise or experience.

Levels of Learning

The theoretical learning frameworks presented in the learning continuum previously shown in figure 2.1 are concerned with either learning by individuals or collectives. The literature is split in the area of learning by collectives along the disciplinary boundaries of organizational learning (based on Argyris and Schön 1978; March and Olsen 1975), which is concerned with the interaction of learning processes between individual employees and their organization, and the policy learning literature that predominantly examines the learning of political collectives (e.g., Egan 2009; Farrell 2009; Heikkila and Gerlak 2013; Zito and Schout 2009). The literature indicates

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that learning can occur on both the individual level and the organizational level, whereby wider changes in the sociopolitical landscape can be relevant to stimulating reflection on an experience or new information, which in turn can result in learning.

Based on this definition, learning on the individual level refers to an individual policymaker that reflects on input in the form of new information and thus engages in factual learning in the form of an experience resulting in experiential learning, and potentially also changes to underlying beliefs based on the input and subsequent reflection (i.e., constructivist learning). The organizational level includes organizational learning (i.e., linking the individual learning outcomes to a learning process in the organization and related government institutions in the wider sphere of multiactor and multilevel governance). Policy entrepreneurs are central actors that can facilitate learning between individuals and learning across the governmental institutions in issue networks, policy communities, and coalitions (for early similar conceptualizations, see Argyris and Schön 1978; Jachtenfuchs 1996; March and Olsen 1975).

The organizational level begins where the official negotiation positions of an entity such as a governmental institution are formed. Once individuals speak on behalf of their division, governmental ministry, company, NGO, or country, policymaking takes place on the organizational level. In the case of the EU, learning on the organizational level would occur between directorate generals of the European Commission, between representatives of the European Commission and the Council and the Parliament. Once individuals do not represent their own personal opinion but rather a position that was formed to represent an organization, the learning can be attributed to the organizational level.

A key distinction between the individual level and the organizational level beyond personal opinion is the legitimacy to participate in the political decision-making process, which is not attributed to individuals, but rather to representatives of a governmental organization or public office. This is also where the interdependency of these two levels becomes clear. An individual policymaker holds a personal opinion that is linked to personal deeper, policy design, and policy detail beliefs, but the individual may not be permitted to represent this opinion, as it does not match the organization's official position. The organization's negotiation position, however, would usually be aligned with its deeper beliefs (i.e., the problem is important to the organization's purpose and seen as worth dealing with), beliefs on the overall policy design (e.g., whether public funds should address the policy problem), and beliefs on the policy details, such as the credibility of

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scientific data to justify a certain policy action. Individual constructivist learning is transferred to constructivist learning on the organizational level if the individual succeeds in influencing the organizational position so that it is aligned with the individual's beliefs.

Factual learning within the organizational level occurs when the overall organization reflects on new input and adds that knowledge to its existing knowledge base such as archives or databases, or communicates it to the employees. Experiential learning within the organizational level is closely linked to the individual level as the employees of the organization accumulate working experience on certain issues and thus collectively form the organizational experience. If this experience is managed via reports, it can be used after the individual moved on to another position within or outside the organization. Thus, there can also be a link between organizational learning in the past, when a group of individuals gained working experience on a policy proposal and moved on to positions outside the organization but left detailed records of their experience. New policymakers engage in factual learning when they reflect on the information left behind by their predecessors and they gain working experience (i.e., experiential learning on the individual level), which in turn is also experiential learning of the organization once several individuals are involved. This aspect of experiential learning and the link between the individual and organizational levels was described in detail by March and Olsen (1975, 150) in their complete cycle of choice. Argyris's single- and double-loop learning concepts, with their focus on error elimination and learning by doing, also fall into the category of experiential learning on the individual and organizational levels (Argyris 1976).

The sociopolitical landscape can be conducive to learning and stimulate reflection on experiences or new information, and thus initiate learning processes on the individual or the organizational level. It is the wider sphere of society that is interdependent with the organizational level via politicians and the media, which both influence the public debate and are influenced by it. This can best be described as learning in a landscape development on the meta-level, which influences and is being influenced by the government institutions and law-making organizations with parallels to Kingdon's (1995) public mood and problem stream that exists and changes over time, whereby policymakers pay close attention to its development as their reelection depends on it or they strive to serve the public demand. Once voters are convinced that a policy is desirable, this provides a strong rationale for politicians to support the policy development, leading to requests from politicians to develop respective policy proposals. On the other hand, civil servants, politicians, and nonnational actors communicate and negotiate

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in their policymaking networks with each other. They exchange positive messages about the desirability of the policy, creating further momentum for the policy rationale to be widely accepted in a self-reinforcing dynamic. Examples include renewable energy, animal welfare, environmental policy, and CPI (Jordan et al. 2010; Urwin and Jordan 2008; Nilsson and Eckerberg 2007).

Thus, to identify learning among decision-makers, and especially to determine where learning occurred, it is essential to formally introduce a second dimension to learning. It contains two levels: the individual level and the organizational level, which are strongly influenced by developments in the sociopolitical landscape. These levels are interdependent, which means that shifts in societies' preferences can motivate the government institutions to address policy problems. As individual civil servants are tasked with the development of a policy that meets sociopolitical demands, they engage in their policymaking networks, interact with other policymakers, and potentially transfer a policy from another vertical or horizontal level of governance to their own level (Rose 1991). Thus, they can engage in experiential learning, gain more knowledge in the process, and potentially also change their underlying beliefs by reflecting on the importance of the policy that they have been working on and form a normative view of how it should be designed (Sabatier 1988).

By developing a new policy and negotiating this policy proposal in the other government institutions such as in the Council working groups or in the European Parliament, individual policymakers can become policy entrepreneurs when they point out facts based on scientific knowledge, convince other actors of the importance of addressing a policy problem by continuously repeating their main arguments, and actively promote their solution to address the policy problem (Blavoukos and Bourantonis 2010; Braun 2009; Roberts and King 1991). These actions of individual policy entrepreneurs can result in convincing other actors within the institutions of the importance of supporting the policy proposal by changing their underlying beliefs via an increase in knowledge and higher awareness of the problems related to the policy proposal. Thus, learning processes on the individual level can also influence learning on the organizational level, which in turn can prompt organizations such as the European Commission to act as policy entrepreneurs on the organizational level (Moravcsik 1999).

In conclusion, the three learning types (factual, experiential, and constructivist learning) can occur both on the individual and on the organizational level. Both levels are interdependent and are influenced by wider

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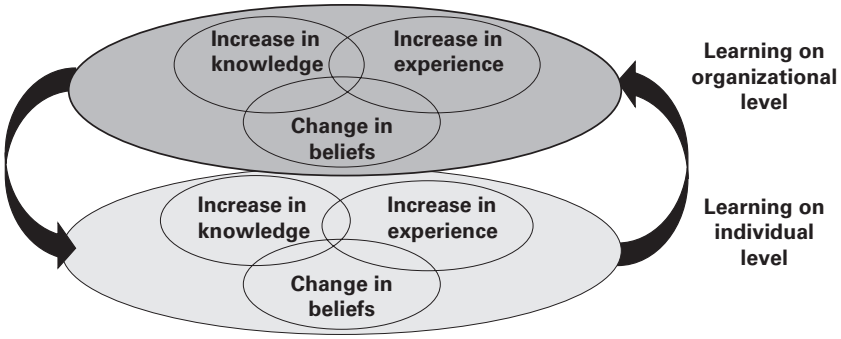

Figure 2.4
Factual, experiential, and constructivist learning on the individual and organizational levels.

developments in the sociopolitical landscape. Figure 2.4 shows the interdependence of the two learning levels, with their embedded changes in knowledge, experience, and/or underlying beliefs symbolized through the smaller overlapping circles within each level of learning.

Is Learning Reflected in the Policy Outcome? The Crucial Role of Leadership by Policy Entrepreneurs

Assuming that political hindering factors in parliament or stakeholders such as lobbyists, the public, and the media do not table a policy proposal based on political bargaining or veto points (Arregui and Thomson 2009; Elgström and Jönsson 2000; Moravcsik 1993; Slapin 2008), an outcome in the form of a policy change can be observed. This policy change can be measured by comparing the outcome with the former policy (or lack of policy) dealing with the problem. However, the mere existence of a policy outcome does not imply that learning occurred in the policymaking process, let alone changes in underlying beliefs in the form of constructivist learning. A policy outcome can also be attributed to alternative, power-related explanations (Clegg 2010), when policymakers simply follow orders from higher levels of the hierarchy, they respond to sociopolitical pressure (Janis and Mann 1977), they engage in classic bargaining based on political power, or policy entrepreneurs have a high influence on the decision-making process.

Bargaining based on political power and the influence of policy entrepreneurs are two key alternative explanations to the policy outcome, both based on established frameworks of the policy process (e.g., see Kingdon 1995; Sabatier 1998). This is useful to remember, as these frameworks explain

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policy outcomes that are independent of learning. One key factor are policy entrepreneurs who push things through (Mintrom 2013) without teaching others or the whole institution. They can either be members of a coalition advocating a certain political objective or neutral power brokers who help the parties settle on the lowest common denominator as a compromise solution based on bargaining (Sabatier 1988). The second aspect is political power. If one coalition is more powerful and in possession of the power to achieve policy change by influencing voting majorities in committees or parliament, this alternative explanation can overshadow learning. Policy entrepreneurs play an important role in arriving at a policy outcome (Kingdon 1995). Once a window of opportunity opens as a result of the coupling of the policy and the political and problem streams, policy entrepreneurs are crucial to advocating a particular policy proposal. The ability of an individual to act as policy entrepreneur, however, depends on their readiness in terms of expertise, ideals, and proposals.

Policy entrepreneurs are individuals who promote a policy solution by investing their personal resources such as reputation, time, and money (Kingdon 1995, 179). To do so, they carry out various activities, such as reframing or defining new policy problems, raising concerns, and influencing public opinion, formulating alternative policies and disseminating their ideas of policy solutions among actors involved in governance such as interest groups, politicians, and civil servants (Mintrom 2013; Mintrom and Norman 2009; Roberts and King 1991). Thus, policy entrepreneurs are central for arriving at the policy outcome. The policy proposals already exist, as does a problem to which they could be attached, and learning may well occur in the process; but to arrive at the outcome, windows of opportunity and policy entrepreneurs are crucial. This illustrates that learning is only an intervening variable that can act as a multiplying factor, resulting in a stronger policy outcome than if learning had not occurred.

While policy entrepreneurs are members of a certain coalition advocating a policy objective, policy brokers are neutral actors who do not strongly represent their own political objective. Instead, policy brokers are usually high-level civil servants or politicians and have an interest in keeping the conflict between actors within acceptable limits (Sabatier 1988). They play a crucial role in brokering a deal and resolving negotiation deadlock situations so that decisions can be reached regarding institutional rules and resource allocations, which ultimately result in policy outputs (Weible, Sabatier, and McQueen 2009, 123). The ACF distinguishes paths for policy change within a policy subsystem. Events external to the subsystem (i.e., on the sociopolitical or wider organizational level) can result in changing beliefs. Internal subsystem events (i.e., on the more immediate organizational level) can

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emphasize failures in the current practices of the subsystem (Weible et al. 2009, 124).

Obviously, different actors advocate certain solutions to the policy problem that is being addressed in the policymaking process. Despite a variety of points of view, actors with similar beliefs frequently join forces to gain a sufficiently critical mass to influence decision-making and command voting majorities (Sabatier and Jenkins-Smith 1993). It assumes that actors group together in advocacy coalitions based on their shared normative and causal beliefs. Actors engage in their advocacy coalition group "in a non-trivial degree of co-ordinated activity over time" (Sabatier 1998, 103). Membership in these groups is open to all actors holding similar beliefs in the policy subsystem, including members of epistemic communities and interest groups, legislators, and government representatives.

To win the support of other advocacy coalitions with similar beliefs and influence decision-making, they employ various strategies (Weible et al. 2009, 123). The more influential group is the coalition that is better able to influence the policymaking process based on their policy-oriented learning (Sabatier 1987) on how to more effectively manipulate the bargaining process. If the coalitions arrive at a deadlock, the outcome depends on the intervention of policy brokers. Overall, political power and policy entrepreneurs are important explanations for a policy outcome that may emerge regardless of learning in the policy process.

Identifying Learning in the Policymaking Process by Applying the Learning in Governance Framework

The most useful approach to identify learning and evaluate its influence on policy processes is a qualitative case study, small-*n* approach (Gibbert, Ruigrok, and Wicki 2008; Yin 2009). There is a clear rationale for a qualitative case study approach using process tracing as the dominant and established method of analyzing learning in policymaking (Hall 2013). The other option, quantitative analysis of learning, has been attempted by Sommerer (2011) on the question whether states can learn from each other. He concludes, however, that

> given unavoidable simplifications, even precise econometric methods will never be able to provide sufficient evidence for the occurrence of learning. At best, indications can be provided for the existence of patterns and correlations that could be interpreted as hints for learning processes with the help of theoretical frameworks. This is because the data does not allow including information into the analysis on causes of cognitive processes and motives for learning. (Sommerer 2011, 95–96; translated from German by the author)

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Process-tracing learning along a policymaking process using qualitative data allows for including such information on cognitive processes and motives. Such a micro approach allows for interviewing individuals who were directly involved in the policymaking process and comparing their accounts with recollections of individuals who observed central decision-maker's actions and communications. Process tracing is used in political science to determine the influence of actors on a certain policy (e.g., Betsill and Corell 2008; George and Bennett 2005; Kittel and Kuehn 2013; Tansey 2007). Process tracing examines causal relationships between variables (for details on carrying out process tracing and analyzing results, see Collier 2011; George and Bennett 2005; Hall 2013; King et al. 1994), and it is defined as "attempts to identify the intervening causal process—the causal chain and causal mechanism—between an independent variable (cause) and the outcome of the dependent variable" (George and Bennett 2005, 206). It allows for identifying what type of learning occurred at which state of the policymaking process by asking the actors involved about their changes in knowledge, experience, and underlying beliefs, as well as why these changes occurred and what or who led to those changes. The learning processes can be identified in each interviewee's answers and compared with the answers of other interviewees with whom the first interviewee interacted in the policymaking process. This also allows for pinpointing when in the policymaking process individual actors learned or did not learn based on the categories of learning identified in the LGF.

Case Selection and Scope

Qualitative research based on case studies needs to be limited to a realistic temporal and issue-related frame that allows a thorough analysis and yet is finite in scope (Creswell 2009; King et al., 1994). Tracing learning along the policymaking process of a specific piece of legislation provides advantages in terms of depth and clarity with a clear temporal start and end point (e.g., from the first prompt to policymakers in the European Commission to develop a policy until the final decision is made in the European Parliament and Council). It also limits the number of key actors involved and allows for mapping out the conditions for learning in relation to the external circumstances. Two key factors to control for are the influence of lobbyists when decision-makers adopted their position, and classic bargaining as it occurs in negotiations, especially where national or vested interests are involved (see also Moravcsik 1993). The analysis needs to differentiate whether a policy change occurred due to learning, especially in the case of constructivist learning, or if the change could be traced to the influence of

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other actors (e.g., following orders), to power relationships or bargaining central to negotiations.

There are drawbacks to this approach that need to be controlled for in order to arrive at the best possible data for analysis. Narrowing down the analysis to one specific case of policymaking could lead to difficulties in tracking down the relevant actors for interviews, who might be unavailable or unwilling to share their insights. Furthermore, ethical considerations are potentially involved in safeguarding the anonymity of the interviewees, as in many cases, only a handful of individuals are involved on certain stages of the policymaking process. As the case studies presented here illustrate, learning varies across cases and depends on a number of internal and external factors. It will require further research, in other policy areas than those presented here, to arrive at generalizable conclusions on when, why, how, and under what circumstances learning occurs in policymaking and other governance-related decision-making processes.

The selected time frame is also relevant and is likely to influence the empirical findings. The policy learning literature suggests a time frame of ten years as appropriate to evaluate whether learning occurred and the extent to which it influenced a policy process (e.g., Radaelli 2009). A shorter time frame may risk missing learning that occurred before the policymaking process started, while a significantly longer time frame can open the analysis to questions regarding counterfactuals and make differentiating between learning and societal change difficult—everything may appear to be a result of learning. A key contribution of the LGF to the learning literature, however, is that it offers the analytical tool set to differentiate learning in policymaking from societal change by setting a comparably high bar for learning to occur. The need for actors to reflect on a policy input for a learning process to be initiated means that learning occurred only if there is evidence of reflection. This also means that learning can be evaluated beyond the ten-year time frame, reaching back decades, as illustrated by the case of greening the CAP described in chapters 6 and 7 of this book.

Furthermore, learning can and does occur in shorter time frames than ten years, as the example of the RED illustrates, when most learning occurred in a time frame over two years (see chapter 4). Learning can come in waves of intensive shorter time periods when internal and/or external events inspire or entice individuals and/or organizations to reflect on new knowledge or past experiences and to subsequently enter into a learning process. This includes experiences that occurred years (and in some cases decades) ago.

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This approach to evaluate learning within the LGF can also be applied to other decision-making processes that are not tied to one specific policy or piece of legislation so long as there is (1) a clear temporal starting point (time=0) and end point (time=1), and (2) some kind of decision-making or implementation process is being followed, which can also include multiple levels of governance or kinds of governance venues. Any process tracing of learning needs to start with some kind of problem, which can be a policy issue or situation where some actors require a change in the status quo, and end in the form of a policy change/outcome or the conclusion of some kind of decision-making or implementation process. The ideal time frame is not necessarily ten years (Radaelli 2009)—the analysis can also be carried out over shorter periods of time (with the recognition that it may be too early to conclude that no or little learning occurred) or longer periods, including reforms of previous decisions or policies including implementation and evaluation phases (with the recognition that societal progress can be confused with learning).

Data Collection: Interview Questions

The interviews should be a semistructured conversation between the researcher and the interviewee and last anywhere between thirty minutes and two hours, although forty-five minutes to one hour emerged as an ideal time frame. The interviewees are asked to provide a detailed account of their involvement in the policy development, including their educational background and previous experience on the issue. This preliminary conversation has four purposes: (1) determining the interviewee's expertise; (2) putting the person at ease; (3) understanding the person's involvement in the decision-making process; and (4) identifying possible instances of learning on the individual or organizational level, which can then be explored more in depth. This part can take anytime between ten and fifty minutes, depending on the interviewee. Some interviewees automatically answer all possible questions, and it may thus be helpful not to interrupt them, while others provide short, precise answers. Here, it is important to keep the conversation going with follow-up questions.

The next part of the interview provides the core information for the analysis. The questions focus on the three types of learning across the learning levels and on other explanations for policy change, so they should be phrased to be easily comprehensible for the interviewee. Frequently, conversational pointers suffice to prompt the interviewee to talk about these aspects. The key areas covered are related to the question of when factual learning, experiential learning, or constructivist learning occurred, or if there were other explanations for policy change:

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Did the interviewees change their level of knowledge or gain more experience while being involved in the policymaking process?

Did the interviewees change their perception of the issue through reflection?

How did the interviewee approach other actors, did s/he convince them, and how did that happen? Did someone exercise leadership? In other words, was there a policy entrepreneur?

Were there other actors that took on a very active role, pushing the policy proposal forward? Why did they do that?

How did the decision-making process between the key actors and institutions unfold? Were there knowledge transfers/experience exchanges, and did one institution convince the other based on persuasion and changes in beliefs due to evidence or previous experiences (learning on the organizational level)?

What were the political interests of the actors involved?

Were there any factors that hindered reflection and subsequent changes in knowledge/experience/beliefs?

Was it a mere negotiation/bargaining, political horse-trading/quid-pro-quo exchange, or did actors convince each other using persuasive arguments?

Did the overall support in society for the policy change over time? How? Why? What was the role of the media and other external actors?

Data Analysis

The qualitative research approach yields a richness of interview data. If the interviewees give permission, all interviews should be recorded digitally and transcribed as to the level of detail required, usually verbatim but without stutters. If interviewees do not give permission, the researcher could take notes or write down a protocol of the interview immediately afterward based on memory. The interviews can be analyzed using a qualitative software program such as NVIVO or by highlighting/color-coding functions in a comprehensive document. The information is then compared and triangulated (i.e., to determine whether the stories of the key actors match). A relevant limitation preventing descriptive quantitative analysis may be that each actor experiences a specific part of the policymaking process from a specific angle and contributes only a piece of the puzzle. Thus, there may be no benefit in using structured questions that would make the interviews comparable to each other, given that most interviewees are likely to report on their distinctive role within the policymaking process, which rarely covers its full development over several years or decades. Thus, indentifying and interviewing other individuals who worked closely with previous interviewees should help

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to triangulate the process. A further control measure is to validate information from the elite interviews via document analysis.

The data is then coded based on a comprehensive codebook as a direct application of the LGF, which allows for linking interview data and quotes to the learning types and further conditioning factors. First, dominant codes such as experiential and factual learning among individuals, the role of policy entrepreneurs, or wider changes in the sociopolitical landscape are identified. In the second step, the relevant quotes are combined into another document, which serves as the basis for presenting the empirical findings within distinctive story lines. Table 2.2 provides a brief summary of the categories used in the codebook, which can be found in appendix 1.

Challenges and Limitations to the Research Strategy

There are inherent limitations in any research approach, including limitations of scope/generalizability in terms of case studies, research ethics,

Table 2.2
Summary of coding categories used for empirical analysis

Key concepts and aspects of learning
Receive information/Reflection/Change
Individual level/Organizational level/Sociopolitical landscape
Factual learning/Experiential learning/Constructivist learning
Learning (reflection on input and subsequent change)
Knowledge/Experience/Underlying beliefs
Other explanation for policy outcome (reflection on input, but no change)
Political interests
Following orders
Institutional process of policymaking
Negotiation/bargaining
Lobbying
Nonlearning (no reflection on input; no change)
Defensive avoidance
Groupthink
External constraints
Conditioning factors with positive/negative effects on learning types
Academic background
Working experience on topic
Leadership style of superior
Network to other actors
Policy entrepreneur
Institutional capacity

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temporal bias, and interviewee bias. This section outlines how some of these issues can be addressed.

Resource and Time Limitations The theoretical framework on learning can be tested in many different cases, with CPI being an especially interesting one given its cross-cutting nature. It would be beyond the scope of this book to test learning in other areas, such as foreign or fiscal policy. New empirical research would be useful to expand on the analysis of CPI in energy, transport, and agriculture policy in the EU toward other levels of governance, particularly multilevel reinforcing processes between the national and international levels or other international organizations, which provide an interesting case within global governance (e.g., see related research on the UNFCCC negotiations given in Rietig 2014, 2019b).

Research Ethics To safeguard research ethics, it is important to address issues around confidentiality and documentation of the research data, as elite interviews may yield sensitive information that could be harmful to the interviewees if published in direct relation to their names. The primary safeguard is the researchers' experienced judgment in those matters and commitment not to harm the interviewees. To mitigate risks to the interviewees, the interview data is coded and names or references that allow indentifying the participants are removed to safeguard anonymity. Every interview should be conducted after obtaining informed consent from the interviewee. This involves the agreement that information identified by the interviewee as sensitive will not be included into the interview transcripts. The data should be stored safely (password protected and not vulnerable to theft, accidental loss, or commercial third-party data privacy violations) and access limited to the research team.

Temporal Bias The nature of research interviews requires individuals to remember their experiences regarding a certain activity that happened in the past. This makes the interviews vulnerable to temporal bias by the interviewees. Particularly in cases where the involvement of interviewees is several years in the past, a potential bias remains that individuals did not recall details and facts correctly or that they were providing their personal, biased interpretation of perceptions and changes in beliefs rather than their actual learning at that point in time. Furthermore, later experiences that are directly or indirectly related to the topic of the interview may have unconsciously altered the interviewees' response to the questions. This temporal bias is a challenge to all research interviews inquiring about personal experiences that happened several years ago. This can be addressed by sending out a note prior to the interviews indicating that the researchers' interest in the interviewees' involvement in the relevant policy. To prevent the interviewees from reinterpreting their involvement, no detailed questions

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should be provided beforehand. This requires the interviewees to react spontaneously to the interviewer's questions. Furthermore, the researcher should triangulate interviewees' answers in the analysis as much as possible with similar accounts by other interviewees to determine whether their accounts match.

Interviewer and Interviewee Bias Besides the influence of communication and interpersonal skills in posing questions during semistructured interviews (Graves 1993) and the importance of rigor in interviews (Baxter and Eyles 1997), the attitude and expectations of the interviewee play an equally important role. Especially if the interviewees are interested in the research project because it might help them to design and implement more effective regulation, they may unconsciously try to provide disproportionally positive information. This phenomenon of learning as positive evaluative connotation is well known in the literature. Nye (1987, 379) pointed out that "when the observer approves of the new conception of self-interest, it is called 'learning'; disliked changes are not." However, learning occurs independent of the value judgment of the observer and depends solely on whether the definition of learning discussed in this chapter has been met. This interviewee bias can be controlled for by being aware of this issue and, if appropriate, by using a negatively framed hypothesis that defensive avoidance may be dominant when initial answers suggest a positive bias toward learning. It requires critical questions targeted at identifying other explanations than learning and hindering factors. Thereby, the negative framing can help to provide a fuller picture of the examined cases. However, experience from the underpinning empirical research presented in this book suggests that the overwhelming majority of interviewees are critical of interpreting too much learning into the policymaking process and sometimes underestimate their personal and the organization's learning. This may require positive pointers to identify instances of learning. To address this de facto negative bias, the researcher can reformulate the questions on learning to determine whether after all, there are some aspects that may be classified as learning. Furthermore, if the researcher can gain experience or otherwise closer insight into the working culture and actual decision-making processes of the organization through observation during a scoping phase, this experience can be useful for comparing the information provided in interviews with such direct experience and thereby making an educated judgment whether the information was accurate or if more interviews need to be scheduled to triangulate the initial findings. In preparation for the fieldwork phase to carry out the seventy-four interviews

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underpinning the research presented in this book (see Appendix 2 for the interview codes referenced in later chapters), I worked with the DG Clima for several months to gain firsthand insights into the inner workings and policymaking processes within the European Commission.

Another source of bias is the potential impact that the interview itself can have on the policymakers. Many interviewees for the empirical research presented in this book informally commented after the interview that they usually do not reflect on whether they learned, why certain decisions were made, and how they came about. Therefore, there is a possibility that the interview questions also lead to a reflection process of policymakers on their own learning or a wider evaluation of the dynamics within the policymaking process as a basis for lesson-drawing in the future:

> Through the conversations back and forth, I was more aware of incidences of learning, if you like, than I was before you first called. I was slightly intrigued by your topic because I was thinking "well, there wasn't a lot of learning at all." I mean now thinking about it a little bit, between member states, certainly, I think was a lot more than what perhaps we originally realized. Certainly there were some individuals that were more influential than others, but I think the learning was more subconscious than conscious though. You see what I mean? I'm not sure we all went into it with a "well, if we learn from each other, we could get the best out of it." I think a lot of it was more subconscious. (Member State [MS] 10 in appendix 2)

Conclusion

In this chapter, I conceptualized learning as an important intervening variable in the policymaking process. The independent variable is a driver for policy change. Intervening variables are learning, which can interact with policy entrepreneurs and power, and other explanations such as defensive avoidance (i.e., the refusal to reflect on input) and political hindering factors, such as opposing political interests and the power of opposing coalitions that succeed in achieving their political objectives. Consequently, the dependent variable of the policy outcome can contain evidence of learning—or other explanations may be dominant, such as powerful coalitions protecting their political interests or classic, intergovernmental bargaining among the actors aimed at achieving preset negotiation objectives.

Table 2.3 provides an analytical framework for analyzing learning processes in policymaking. There are two levels of learning: the individual level, as identified in the cognitive learning literature, and the organizational level. Both are influenced by shifts in the sociopolitical landscape. On each

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Table 2.3
Analytical framework to determine and measure the type of learning that occurred on the individual and/or organizational level

	Factual Learning (gain in knowledge)	Experiential Learning (gain in experience)	Constructivist Learning (change in underlying beliefs and perspective)	
Individual level	Increase in knowledge among experts and higher-level decision-makers by being involved in the policymaking process and having to engage with details to defend their departments' policy position in negotiations	Learning by doing; learning to play negotiation tactics better and to agree to opposing coalitions' demands on minor issues in order to hold positions on more important issues closer to policy detail/policy design and deeper beliefs	Deeper beliefs	Formation or change of individuals' worldviews on fundamental issues such as prioritizing environmental or social concerns over economic concerns
			Policy design beliefs	Change in existing beliefs or formation of new beliefs of individuals on the existence and importance of a policy area, as well as the need to address problems through policies or other solutions; changes can occur over the longer term and/or shorter term
			Policy detail beliefs	Change in existing beliefs or formation of new beliefs of an individual on details regarding policies and the type of policy instruments (e.g., command and control regulation versus voluntary agreements), as well as details in the targets of such policies

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Influence of Policy Entrepreneurs

Organizational level	Increase in knowledge due to elements such as new scientific evidence, additional insights into policy area	By being involved in the process; improved experiential learning as more actors get involved in new or different modes of decision-making	Deeper beliefs	Changed worldviews of the organization on fundamental issues such as prioritizing environmental or social concerns over economic concerns
			Policy design beliefs	Change in existing beliefs or formation of new beliefs within an organization on the existence and importance of a policy area, as well as the need to address problems through policies or other solutions; changes can occur over the longer term and/or shorter term
			Policy detail beliefs	Change in existing beliefs or formation of new beliefs within an organization on details regarding policies and type of policy instruments (e.g., command and control regulation versus voluntary agreements), as well as details in the targets of such policies

level, learning processes can occur in the form of reflection on additional knowledge, experience, and changing beliefs. The combination of the two levels, the sociopolitical landscape as a central independent variable, and the three learning types leads to six possible instances of learning, which can be further extended with the three subaspects of constructivist learning and the wider shifts in the sociopolitical landscape. These can be identified by tracing the behavior and activities of actors within a policymaking process; asking them about their changes in knowledge, experience, and underlying assumptions and whether their actions resulted in additional knowledge, experience, or changed beliefs in other actors, the organization, or even the sociopolitical landscape; and exploring to what extent their own perspectives changed based on instructions from higher levels of hierarchy, interactions in networks and wider societal consensus. Table 2.3 summarizes the LGF in its two dimensions of the levels of learning (individual and organizational level) and aspects of learning (factual, experiential, and constructivist learning). The empirical findings of a case study would subsequently fill in the corresponding fields, which contain generic examples as illustration.

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3 Policymaking and Climate Policy Integration in the European Union

To determine the relevance of learning for policy change, it is important to understand the specifics of the examined policy areas. In this chapter, I contextualize the empirical research on learning within the EU. I will briefly explain the key underlying governance principles and the policymaking process within the EU, as well as conceptualize CPI as the overarching umbrella for the selected case studies on energy, transport, and agriculture policy.

I focus on the EU because of its self-understanding as a leading actor in global climate governance (Jordan et al. 2012; Schreuers and Tiberghien 2007; Skjærseth 2017) in terms of advanced climate policy. This is primarily motivated by the need to implement international commitments, such as the Kyoto Protocol and the Paris Agreement, as well as the desire to encourage other countries to step up their climate action by taking on a leadiator role that balances international leadership with mediating between emerging economies (Elgström and Skovgaard 2014). Following the economic and Eurozone crisis years, this ambition has become more modest (Skovgaard 2014), but it is increasingly reemerging on national and subnational political agendas following record weather extremes and youth protests in 2018 and 2019, including the declaration of climate emergencies. In December 2019, the European Commission under President Ursula von der Leyen announced the European Green Deal as Europe's "man on the moon" moment to achieve carbon neutrality by 2050.

I present case studies that fall within European climate governance and CPI (Adelle and Russel 2013; Rietig 2013), a cross-cutting policy field that focuses on the integration of climate change objectives into other, traditionally non-climate change–oriented policy areas that have a set of traditional objectives. These include energy policy (having a reliable supply of affordable energy), transport (getting people and goods from A to B at a reasonable cost and time), public finances (providing public goods at a

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reasonable cost) and agriculture policy (ensuring food security). This chapter serves as an introduction to the empirical chapters by offering background knowledge on the framework conditions governing policymaking in the EU and CPI.

The Policymaking Process in the European Union

The EU is a complex system of multiple governance layers and venues, with diffuse leadership structures operating in a wider sphere of multilevel governance (Hooghe 2012) and increasingly elements of polycentric governance as well (van Zeben and Bobic 2019). The process of European integration resulted in debates on the character of the EU between the extremes of a collection of nation-states (Moravcsik 1993) and a semifederal system (Nedergaard 2006b), while the Treaty of Lisbon (Craig 2010) in particular moved the EU closer to the latter characteristic. Undoubtedly, it is a system of complex multilevel governance (Jordan 2001; Jordan et al. 2012) that, like any political system, holds its own unique particularities that need to be acknowledged before offering wider lessons.

Policymaking in the EU is a negotiation process among multiple actors representing the local level and political parties (European Parliament), the national level (referred to as Council in this book including the Council of the EU and its system such as working groups and meetings of the permanent representatives/Committee of Permanent Representatives [COREPER]), and supranational level (European Commission). The negotiations are iterative and begin with an initial motivation to prepare a policy proposal at the European Commission, as the institution with the sole power to make policy proposals (Hix 2005; Nugent 2001). This motivation can include a request from the European Parliament, the Council, or input by external stakeholders such as interest groups or individual member states. It can also be internal to the European Commission at the initiative of a Commissioner or a staff member, mostly within the unit responsible for the respective policy area (Sabathil, Joos, and Kessler 2008). At the drafting stage of the policy proposal, the unit in charge within the European Commission frequently commissions studies; organizes meetings with experts; takes into account information provided by relevant stakeholders, including lobbyists; and undertakes impact assessments of various policy options (Nugent 2001). Depending on the exact nature of the policy proposal and the administrative culture of the respective directorate general or cabinet, this process has a varying level of formality. Following the early drafting and policy formation stage, the directorate general in charge of the policy

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proposal needs to coordinate with other directorate generals that have similar or diverging interests within the Interservice Consultations. In this process, other directorate generals formally provide their input. The policy proposal is then negotiated by the heads of cabinets (in a meeting called the Hebdo meeting) and finally decided by the College of Commissioners, which includes all Commissioners in charge of their different issue-based portfolios (Hix 2005; Hooghe 2001). If agreement is difficult to reach, the president of the European Commission or the secretary general intervenes as a policy broker to suggest a solution (Nugent 2001, 243).

The European Commission publishes its policy proposal, which is subsequently negotiated among the member states in the working groups of the Council. If the policy proposal falls within the remit of codecision, the European Parliament's issue-specific committee discusses the proposal before its vote (for a detailed description of the concept of codecision involving the European Parliament and Council, see Häge and Naurin 2013; Huber and Shackleton 2013). Representatives of the European Commission participate in all meetings to answer questions and facilitate the negotiations. If no consensus can be reached, a trilogue between key actors representing the European Commission, the European Parliament, and the Council is initiated (Hix 2005; Nugent 2001; Rasmussen and Reh 2013). This negotiation and policymaking process is based on agreement among key actors, including civil servants at the European Commission and those representing their member state's national interests, as well as politicians in the European Parliament and Council.

Overall, the power of the European Parliament has been strengthened with recent treaties, especially the Lisbon Treaty (Craig 2010). The role of the European Commission has increasingly moved toward a facilitating and brokering position within the "triangular interinstitutional relationship" (Nugent 2001, 261). While the debate between neofunctionalism and intergovernmental perspectives on European integration dominated the second half of the twentieth century (Moravcsik 1993; Risse 2005), more recent contributions have argued for multilevel governance and concluded that the use of public policy literature is appropriate in analyzing the EU policymaking process as the EU is moving toward a normal political system (Hix 2005). While the European Parliament represents the interests of European citizens via its elected members belonging to national political parties similar to a national parliament (Egeberg et al. 2013; Marshall 2012), and the Council represents the national interests of member states from an intergovernmental perspective similar to states in a federal political system (Beyers 2005; Häge and Naurin 2013; Warntjen 2010), the European Commission has a more complex role (Egeberg 2012).

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The European Commission plays a significant steering role in the policy process and—although its formal role ends with the publication of a policy proposal—also a large influence on the policy outcome, making it "the world's most powerful international executive" (Hooghe 2012, 88). While intergovernmental approaches downplay the supranational characteristics of the European Commission's bureaucracy (e.g., Moravcsik 1993) and point toward the interests of the member states instead, empirical studies since the 1990s have concluded that the European Commission can be understood as a policy entrepreneur that plays a leading, and even steering, role (Braun 2009; Cram 1994; Krause 2003; Hooghe and Keating 1994; Hooghe 2012; Laffan 1997). This role harks back to the European bureaucracy's origins and the visions of Jean Monnet, who envisaged the European administration as a small body of officials from different backgrounds who would work together to "produce solutions to common problems . . . and maximise the chances of survival and influence in a world of entrenched bureaucratic interests" (Page 1997, 5). The power of the European Commission stems from its political role, which includes its unique competence to initiate EU legislation and the need to persuade other groups and stakeholders before proposing legislation with the intention to have a high chance of being adopted with as few changes as possible (Page 1997, 146–47). Subsequently, the European Commission understands itself as holding a leadership role and is motivated in its actions by the key objective of driving European integration forward toward an ever closer Union (Hix 2005; Hooghe 2001; Nugent 2001).

The European Commission is frequently treated as a unitary actor, given its role based on the treaties (Koch and Lindenthal 2011), with little attention to the interplay of the different directorate generals, or even the individual bureaucrats as key policymakers. This argument has two dimensions. First, closer examination of the European Commission reveals a bureaucracy that not only has unique characteristics, but also shares elements with both continental national bureaucracies and international bureaucracies, while at the same time having no clear leading figure but many points of exercising leadership (Page 1997). The various directorate generals with their specific policy areas can be compared to national ministries, in that they take the lead in developing policy proposals within their own area of competence. This needs to be shared in cross-sectoral policies that involve two or more directorate generals, while one maintains ownership of developing the policy proposal (Nugent 2001; Sabathil, Joos, and Kessler 2008). Recent reforms of the Juncker Commission (2014–2019) introduced a stronger role for vice presidents and centralized decision-making toward the political

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leadership of the European Commission at the level of the president and vice presidents of the European Commission, as well as the European Commissioners and their cabinets (Bürgin 2018), which is maintained by the Von der Leyen Commission, which entered into office in December 2019.

The second dimension is the role of bureaucrats, both on the top level, as Commissioners appointed via elected politicians, and individual civil servants. Both types of actors within the European Commission have been found to act as policy entrepreneurs, going to extraordinary lengths to steer their policy proposals through the decision-making process and to strategically use aspects of leverage within the institutional machinery to achieve their objectives (Braun 2009; Skjærseth and Wettestad 2010; Wonka 2008). In this context, it is important to note that the "goals, objectives and even strategies of those who participate in decision making are influenced heavily by their organizational affiliation and position" (Page and Wouters 1994, 446). Individuals at other positions of coordinating power than the European Commission, such as the rapporteurs in the European Parliament and the president of the Council, can also play a central role as policy entrepreneurs (Egeberg et al. 2013; Marshall 2012; Huber and Shackleton 2013).

These findings point toward collective leadership based on a shared institutional objective linked to an individual's organizational affiliation and current position, as well as shared beliefs about the overall policy objectives and wider goals of the organization. This deepens integration among the member states toward a supranational polity with a "semi-federalist character" (Nedergaard 2008, 180) as envisaged by the EU's founders. The shared deep-core belief among most civil servants at the European Commission and its overall objective are to serve the common good of Europe and to further European integration. In the interinstitutional triangle of the EU institutions, the European Commission has traditionally been described as a supranational actor focused on advancing supranational empowerment, whereas the member states represent the intergovernmental pole via the Council that defends their national sovereignty (Hooghe 2001). When the beliefs of representatives of the European Commission across multiple levels of hierarchy are taken into account, we arrive at a triangle between supranationalism, where the College of Commissioners provides political guidance and its civil servants "defend the Commission's role as Europe's executive and help usher in a federal Europe"; institutional pragmatism, where both the Commission and the Council provide political guidance with a focus on shared needs and European solutions; and finally more traditional intergovernmental state-centrism, with member states remaining in the "driver's seat" (Hooghe 2012, 91).

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Climate Policy Integration in the European Union

To justify its image and leadership ambitions on the international level (Schreuers and Tiberghien 2007; Wurzel and Connelly 2011; Skjærseth 2017), the EU designed a number of specific climate policies, such as the European Emission Trading Scheme, to implement its Kyoto commitments (Skjærseth and Wettestad 2009). Yet many sectors remain relatively unaffected by specific climate policies, such as agriculture, regional and economic development, trade, and parts of the transport sector (Kettner, Kletzan-Slamanig, and Köppl 2012). Examples of the integration of climate objectives into other policy sectors include energy efficiency, the use of renewable energy, and the conditionality of regional development funds (Persson 2009) upon prioritizing low-carbon technology and infrastructure. It is crucial to move beyond understanding the related concepts of sustainable development, environmental policy integration (EPI), and CPI as fuzzy principles (Dupont and Primova 2011; Lafferty and Hovden 2003, 5) or political constructs (Nilsson and Persson 2003) that are interpreted differently by actors. Instead, clear-cut conceptualizations are required to enable their implementation across governance levels (Watson, Bulkeley, and Hudson 2008).

So what exactly is CPI? It originates from the concept of policy integration (Underdal 1980) and developed from EPI, which has played a relevant role in EU policymaking since the 1990s. CPI is a separate concept that has a limited overlap with EPI. In terms of policy design, CPI is a parallel stream to single-purpose climate policies, both on mitigation and adaptation. Criteria to evaluate the success of CPI include the extent of synergy in the sectoral policies' objectives with climate mitigation/adaptation in relation to innovation, technology, and infrastructure; the extent of state intervention required; and political factors including policy stability, economic feasibility, and societal consensus (Rietig 2013).

What Does Climate Policy Integration Mean?

The concept of policy integration goes beyond EPI and can be traced back over three decades, whereby EPI can be understood as the mother concept of CPI (Adelle and Russel 2013; Lenschow 2002; Jordan and Lenschow 2010). Developing a common conceptualization and an analytical framework for EPI has proved challenging. One reason might be the requirement of political consensus and a desire to not clearly define the concept similar to the relatively flexible use of sustainable development in policymaking

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to avoid complications based on different party-political and ideological interpretations (Jordan 2008).

It is problematic to conceptualize CPI as having the status of a principled priority (Lafferty and Hovden 2003) similar to EPI due to legal and normative considerations (Rietig 2013). While it is desirable as an ideal type of policy, the realities of policymaking should be measured as a benchmark of what constitutes successful CPI. The central legal issue is that CPI has a weaker standing as a policy principle and in international law, as it lacks the quasi-constitutional basis in European treaties (Rietig 2013) that is enjoyed by EPI (Collier 1997). To date, it remains merely a theoretical idea. Given the lack of a legal basis in national or European law, there are no provisions for implementation. It remains unclear who should oversee, evaluate, and carry out the integration of climate policies, let alone have appropriate legal, policy, and administrative instruments available for enforcement (Rietig 2013).

An important aspect that differentiates climate from EPI (Dupont and Primova 2011; Nilsson and Nilsson 2005; Nilsson 2006) is that climate measures can contradict environmental protection objectives such as hydropower and nuclear power. Biofuels and biomass constitute a major component of the EU's and US's renewable energy strategies to reduce carbon emissions. However, their positive contribution to climate mitigation targets has become highly contested given their high carbon intensity, as well as increasing evidence of their negative environmental consequences, including indirect land use change (ILUC) when forests and peat lands are converted to intensive agricultural use (Rietig 2013; Searchinger et al. 2008; Sharman and Holmes 2010). Despite their negative environmental impacts, hydropower and bioenergy are widely regarded as renewable energies and form a core measure to address climate change. Nuclear power is regarded by most countries as an acceptable medium-term choice to reduce emissions next to improving energy efficiency and increasing the share of solar or wind power (Kulovesi, Morgera, and Muñoz 2011), although there is also a risk of disastrous environmental consequences following nuclear accidents and the unresolved question of how to dispose of nuclear waste safely.

Conceptualization of Climate Policy Integration

Consequently, CPI should be seen as a separate concept from EPI, but ideally with major overlaps. It is thus the integration of climate policies designed to combat climate change into local, national, and international sectoral

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policies. CPI has a special relevance for policy fields in which the use of regulatory instruments can increase the synergy between climate mitigation and adaptation and the sectoral policies' objective. Climate objectives cannot be integrated into all other policy sectors with the same success (Rietig 2013). The core aspect is the level of synergies between the sector's policy objectives and climate objectives and the compatibility of underlying beliefs of key actors (Rietig 2019a). Synergies can exist in terms of technology, innovation, and infrastructure. The synergies depend on the potential for mitigation and adaptation and how easily the objectives of the policy sector can be harmonized with the climate objectives. Harmonization can happen via regulatory instruments or financial incentives.

Successful CPI requires favorable conditions from all three forms of governance—that is, hierarchy, market, and network governance across multiple governance levels (Watson et al. 2008). The first condition for successful CPI is continued political support beyond a change in government ensured by consensus within the governmental hierarchy or stable power equilibriums (Hamdouch and Depret 2010; Söderberg 2011; Weber and Driessen 2010). If there are frequent U-turns, either in support of or against the integration of climate policy considerations, a successful implementation may prove challenging. An empirical example of this is the third and most recent U-turn in German nuclear policy toward phasing out nuclear power in the early 2020s following the Fukushima disaster in 2011.

The second condition is societal consensus among all actors within the governance network and a wider sentiment in society in favor of integrating climate objectives into other policy sectors. The third condition is the economic feasibility of CPI, which includes low policy volatility, and thereby low investment uncertainty. Only when market actors understand upfront investment as advantageous for their innovation capacity and have a reliable, stable legal framework incentivizing the investment in clean technologies and supporting infrastructure (Hamdouch and Depret 2010) are they likely to cooperate. Furthermore, where financial instruments are used to incentivize the integration of climate policies such as development funds, donors need to possess the capacity to enforce conditionalities of payment upon compliance with CPI priorities and to verify the use of funds via monitoring.

It may prove challenging for governments to adopt appropriate legislative proposals that integrate climate objectives due to internal coordination challenges. The attempt to integrate climate objectives can result in conflicts between government departments and other involved actors regarding policy priorities and competencies. Policymakers need to take this challenge into consideration, especially in instances where the affected

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policy sector has few automatic synergies with CPI (e.g., see the cases examined by Söderberg 2011; Weber and Driessen 2010; Watson et al. 2008). This can be addressed by introducing incentives for close cooperation among government departments across hierarchical levels and by setting up climate policy units within all government departments relevant to CPI.

The implementation of CPI requires a considerable time span. Existing legislation to integrate climate objectives is vulnerable to ongoing political dynamics, either via elections, shifting public opinion, or external shocks (Rietig and Laing 2017). Those can reverse the decisions made before the shock situation or by a previous government (Jones and Baumgartner 2012; Söderberg 2011). This opens up the necessity to design policies that stick (Levin et al. 2012)—that is, that create a path dependency that is not easily reversible by external political events and that have a high level of policy stability. This could happen via the creation of industries with business opportunities around the new policy area that subsequently develop vested interests and would thus protest policy change reversing the policy. Other options could be political decisions for an overall policy objective, while allowing governments to implement appropriate interim steps toward the overall target via executive orders triggered by automatic interim monitoring and evaluation processes. Membership in an international organization or regional bloc with a supranational level of decision-making such as the EU can also support policy stability, as short-term public opinion or political party objectives could less easily sweep away previous commitments (Rietig and Laing 2017).

CPI also requires a strong basis to remain resilient toward reoccurring economic and financial crises around the globe, which have frequently negative repercussions on other countries. Companies and local authorities can hardly make investment decisions in infrastructure, power generation, or production methods under the uncertainty that their additional short-term costs from integrating climate concerns may not provide medium- and long-term benefits, given the risk of the more stringent policy being discarded after a few years (see also Brunner, Flachsland, and Marschinski 2012). One such example of providing policy stability is the adoption of a target for reducing greenhouse gas emissions by 80 to 95 percent from 1990 levels as well as the more recent move toward aiming for carbon neutrality by 2050. In particular, the Paris Agreement on climate change, with its requirement of increasing national ambition to address climate change and regular review cycles, offers a certain minimal measure of stability in the long term, even if national elections temporarily bring governments into power that ignore the relevance of climate action or even actively dismantle

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existing climate policies. For example, US President Donald Trump withdrew the United States from the Paris Agreement. Following his inauguration in January 2021, US President Joe Biden returned the United States to the Paris Agreement and resumed ambitious climate policies including matching the EU's objective of becoming climate neutral by 2050.

Conclusion

In this chapter, I provided a brief overview of the European policymaking process and CPI. I zoomed in on the key role of the European Commission, which can be understood as a collective policy entrepreneur in the European policymaking process based on its special role as the only institution with the power to propose legislation. The European Commission also understands its mission as driving further European integration. To a certain extent, these characteristics are unique to the Commission; however, the notion of policy entrepreneurs in public administration, both as organization and as individual, is not new or limited to it. Originally developed in a predominantly US or international context (Howard 2001; Kingdon 1995), the notion of policy entrepreneurs finds an increasing uptake in the literature on the EU, with some contributions focusing on the European Commission, which as an institution acts as a policy entrepreneur (Krause 2003; Mintrom 2013), and on individuals taking on the roles of individual policy entrepreneurs from within the European Commission (Bauer 2008; Braun 2009; Skjærseth and Wettestad 2010).

For CPI to succeed, governmental institutions (the European Commission in the European case) need to retain a steering role. They must provide incentives for CPI through regulatory and distributive intervention (Brunner et al. 2012). The level of intervention required depends on how well each sector's objectives match with the potential for climate mitigation and adaptation (Swart and Raes 2007) and how closely underlying beliefs are aligned or potentially competing (Rietig 2019a). These synergies in objectives also determine the economic feasibility of CPI in the respective sectors and the level of societal support for such policies.

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4 Learning in European Energy Policy

The RED (EU 2009a) remains one of the major flagship policies on renewable energy in the EU. Its main purpose was to increase the share of renewable energies in the EU to 20 percent by 2020, which has been widely achieved. It is one of the few existing examples of CPI at a large scale, as it integrates climate objectives into the core objective of providing energy (Rietig 2013). The RED emerged as part of the wider EU Climate Package of 2008–2009, which also included a reform of the Fuel Quality Directive (FQD) (EU 2009b), the European Emission Trading Scheme (Skjærseth and Wettestad 2010), and the Energy Efficiency Directive, and is linked to the EU's climate targets of reducing emissions from 1990 levels by 20 percent by 2020, as well as increasing energy efficiency by 20 percent (EC 2008a). The RED can be regarded as an overarching policy that combines the three aspects of electricity, biofuels, and heating and cooling. The Renewable Electricity Directive (EU 2001; Held, Ragwitz, and Haas 2006; Nylander 2001) and the Biofuels Directive (EU 2003a) form the basis for the RED, which as a third component also addresses heating and cooling. The FQD also influenced its policy development, which began in 1998 and concluded in 2009 (EU 1998, 2009b). The interdependency of biofuels as part of transport policy with the FQD resulted in different learning processes and offers a particularly interesting case to better understand the relevance of learning in policymaking.

Following the adoption of the 2009 RED, the EU began to negotiate climate change commitments for 2030, with related targets for renewable energies and energy efficiency, as well as attempting to reform the RED with regard to the negative climate and ILUC effects of food-crop-based biofuels. These follow-up negotiations throughout the 2010s resulted in a recasting of the RED in 2018 (EU 2018) and a limit on how first-generation biofuels can be counted toward countries' renewable energy targets (European Commission 2019). This was motivated by international commitments under

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the Paris Agreement on climate change—that is, the need to implement international agreements (European Commission [EC] 30, see Appendix 2 for interview codes/references). The EU agreed on an overall renewable energy target of 32 percent for 2030 based on the individual legally binding targets for member states, with a review in 2023 to determine if the EU is on course to meet its commitments under the Paris Agreement (EU 2018). This approach mirrors the pledge-and-review, bottom-up approach of the Paris Agreement, in which countries pledge individual commitments that are subsequently reviewed at the international level (Falkner 2016). This very moderate reform illustrates the challenge of path dependencies and incremental changes arising from policies and points toward the crucial role of learning around the original 2009 RED (EC 29), and in particular its biofuels component. This discussion of the RED focuses on the biofuels controversy, in particular the key phase of the late 2000s and early 2010s. This time period is crucial to understand the moderate ambitions and modest outcomes of the 2018–2019 recast of the RED and the accompanying delegated act of the European Commission on indirect land use changes from first-generation, food-crop-based biofuels.

In the first section, I provide a brief overview of the development of the RED within wider sociopolitical shifts as a potential driver for learning. Learning in the electricity and heating/cooling components of the RED occurred predominantly on the individual level as policymakers involved in the legislative process gained additional knowledge and experience, resulting in factual and experiential learning that can be considered as part of any policymaking process (see Rietig 2018b for a detailed analysis). The second section of the chapter focuses on the biofuels controversy as a particularly interesting case of learning when underlying beliefs become contested as a result of new scientific knowledge.

The Development of the Renewable Energy Directive

To improve energy security as concerns emerged following the oil shocks in the 1970s, the EU decided to explore so-called alternative energies through increasing research and development efforts (Member state [MS] 1, see Appendix 2 for interview codes/references). In the 1990s, the purpose of alternative energies was widened to a triple objective of economic development, energy security, and climate change. The European Commission subsequently "talked about the pillars of energy policy . . . , it contributed to climate policy, it generated jobs, and . . . contributed to the energy supply discussion so in that sense we all thought the arguments supporting renewables were

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broader than pure climate change" (EC 8). Thus, improving climate mitigation and addressing environmental objectives were not primary objectives of renewable energies, but rather "added . . . on top" (EC 12). This triangle proved to be a magic formula, as it offered a good fit with domestic interests in the member states as it promised a range of cobenefits for energy policy and industrial policy, especially as the domestic nature of renewable energies reduced energy dependence (EC 2).

The European Commission was a key driver in promoting the use of renewable energies in Europe. After the oil shocks of the 1970s, a unit on Alternative Energies (later renamed Renewable Energies and Energy Efficiency) was established to promote the uptake of renewable energies. It prepared green and white papers setting out a renewable energy plan (EC 1996, 1997). This resulted in the development of the 2001 Renewable Electricity Directive (EU 2001), in which "the Community recognises the need to promote renewable energy sources as a priority measure given that their exploitation contributes to environmental protection and sustainable development. In addition this can also create local employment, have a positive impact on social cohesion, contribute to security of supply and make it possible to meet Kyoto targets more quickly" (EU 2001, Recital 1). Member states had to set national indicative targets (EU 2001, article 3), which resulted in political conflicts and compromises regarding countries' exact targets (Rowlands 2005; Verhaegen et al. 2007). There was a strong consensus among decision-makers and various stakeholders that the share of renewable energies as alternatives to fossil fuels should be increased, which subsequently facilitated the adoption of the directive. As a consequence, there was a consensus regarding actors' beliefs on normative policy objectives (i.e., policy design beliefs), but also distributive conflicts regarding the exact instruments and targets based on national interests. These can be regarded as beliefs on policy details.

A central motivation for European decision-makers' increased support for renewable energy was needed in order to deliver on the international climate change commitment and consequently reduce emissions. Two landmark events on the international level resulted in increased efforts by the EU and the European Commission in particular to promote the uptake of renewable energies. The first event was the Rio Earth Summit in 1992 by the United Nations Conference on Sustainable Development (UNCSD), which established the UNFCCC and increased the pressure on national agendas to reduce greenhouse gas emissions.

The EU played a leadership role in international climate negotiations (Schreuers and Tiberghien 2007) and wanted to be regarded as a role model

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(Fouquet 2012, 1). This brought the need to save face by implementing domestically the ambitious commitments that the EU had pushed for on the international level. The second landmark event was the UNFCCC conference in Copenhagen in 2009, where countries tried to agree on a post-Kyoto climate treaty, which increased the time pressure and turned out to be an important driver for the quick adoption of the EU's Climate and Energy package even though the summit itself was regarded as a failure (EC 8).

The UNFCCC also contained an article on civil participation in implementation, thus pointing toward the importance of local governments and regional administrations to reduce emissions. As part of the implementation of the Framework Convention's articles on civil participation, the European Commission engaged with mayors across Europe and set up several networks to promote the uptake of renewable energies and energy efficiency measures on the local level from 1993 onward (Hildingsson, Stripple, and Jordan 2012). These networks included the Covenant of Mayors and the Greater London Energy Efficiency Network. Furthermore, the European Commission set up programs to promote the uptake of renewable energy and raise awareness among citizens, companies, and member states (ALTENER), as well as energy efficiency (ENERGY CITY and FEDEREN) with seed funds. It encountered widespread support, "it was very enthusiastic, a lot of people were really enjoying it, it was really dynamic . . . because it's a positive message. So local authorities have been very keen to enter into this concept" (EC 1).

The European Council meeting in March 2006 set the overall rationale for developing a renewable energy strategy that would contribute to the overarching objectives of addressing security of supply, climate change, accelerating the uptake of renewables, and the importance of improving transparency and integration of the energy market (European Council 2006a, 13–15). As heating remained widely unaddressed, the European Commission, together with a number of environmental organizations and actors from the EU member states, lobbied the European Parliament to introduce the topic into discussions at the European Parliament (EC 1; EC 4). Subsequently, the European Parliament requested the European Commission to develop a proposal for a directive that would include the aspects of heating and cooling (European Parliament 2006). This European Parliament's resolution also specified the policy measures that it expected the European Commission to propose (European Parliament 2006, I). European Commission subsequently produced the Renewable Energy Road Map (EC 2007a) with renewables targets that would be adopted at the March 2007 European Council meeting (European Council 2007; EC 2).

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In the Renewable Energy Road Map, the European Commission proposed setting a legally binding target to achieve a share of 20 percent of the overall energy mix from renewable energy sources, including a mandatory minimum target for biofuels of 10 percent share in 2010, which would require a new directive, as the regulatory framework would need to be strengthened substantially (EC 2007a, 2007b). The Renewable Energy Road Map of January 2007, therefore, had a significant impact on the decisions reached by the European Council and the subsequent proposal of the RED put forward by the European Commission (Rietig 2018b).

The European Commission was a key driver behind the renewable energy targets. It acted as a key policy entrepreneur in using the 2008–2009 window of opportunity opened by a favorable economic situation and deadline pressure of the emerging economic crisis and the international climate change negotiations. The European Commission has been identified as an important policy entrepreneur in other areas, such as the European Emission Trading Scheme (EU 2003b; Skjærseth and Wettestad 2010; Wettestad 2005) and social policy (Wendon 1998). It set up and promoted the networks that facilitated and supported the uptake of renewable energies on the local level and paved the way for the RED by raising the profile of renewable energy in the European Parliament and the European Council and further requests to develop a climate strategy beyond 2020, reaching toward 2050 (European Council 2005).

Germany, France, and the United Kingdom (UK) also advocated a European climate strategy, resulting in the 2007 European Council reaching conclusions on a 20-20-20 target. This target was to be achieved by 2020 and contained the three sub-targets of reducing greenhouse gas emissions by 20 percent (compared to 1990 levels), increasing in the share of renewable energies in the EU to 20 percent and improving energy efficiency by 20 percent (EC 2009; European Council 2007, 2008). German chancellor Angela Merkel, who held the presidency of the European Council meeting, advocated the importance of a European climate strategy. Together with the European Commission president Manuel Barroso, she convinced British prime minister Tony Blair and French president Nicolas Sarkozy to agree to the proposal (EC 3; MS 8). Blair was advised by his administration not to support the decision, given that the UK at that time were getting less than 2 percent of their energy from renewable sources and would most likely not be able to deliver on their corresponding renewable energy target by 2020 (MS 8). However, given that this was his last European Council meeting before the end of his term and he was alone with the other heads of state while making the decision, he agreed to the 20 percent overall European

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target on increasing the share of renewable energy in the EU (MS 8). The UK's support meant that they were not mobilizing other member states to block the policy proposal, further facilitating the open window of opportunity. There was also strong support from Barroso, as "this was one of the key policy areas where there was a clear European dimension . . . [requiring European action,] and it was a chance for the EU to take the lead in terms of broader European cohesion and cooperation" (EC 8).

A number of factors resulted in an unusually quick adoption of the RED. These included strong political support for the overall climate package, deadline pressure to present an ambitious European climate policy at the upcoming UNFCCC summit in Copenhagen in 2009 so the EU could live up to its Kyoto Protocol commitments and its image as a leader in the area of climate change, and the closing window of opportunity due to effects from the worldwide financial and economic crisis (EC 2; EC 3). Nevertheless, the question of how the target should be achieved sparked a major controversy, especially with regard to the role of biofuels in transport and the burden-sharing agreement between member states (EC 6; EP 2).

The biofuels aspect merits further attention, as it indicates alternative explanations to learning as a result of defensive avoidance among actors who were reluctant to reflect on the other groups' positions (Janis and Mann 1977). Key reasons for this controversy were contested scientific knowledge at the time of policymaking, path dependency and policy lock-ins, and incremental steps to correct policy outcomes made under scientific uncertainty after the evidence pointed toward policy failure. The policy development can also be seen as an incremental experiential learning process on biofuels policy from first- to third-generation biofuels that allow competitive advantages later (as argued by Dunlop 2010, 356). The side effect of this approach, however, was a further lock-in effect into first-generation biofuel technologies that cannot easily be substituted with second- or third-generation biofuel technologies because these are fundamentally different and benefit different industries (e.g., food-crop-based first-generation biofuels predominantly benefit farmers, while using algae in seawater farms as third-generation biofuels benefits entirely different actors).

The progress in terms of limiting the negative effects of food-crop-based first-generation biofuels on ILUC remained limited beyond 2020, as only accounting rules were changed how countries can count high-risk ILUC food-crop-based biofuels toward their renewable energies in transport target (a cap was set for 2019, which decreases into the 2020s). It does not limit the actual use of first-generation biofuels, however, as countries are permitted to import and use food-crop-based biofuels and a distinction is made between high-risk

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ILUC toward high-carbon stock areas (e.g., using forests or peat lands for agricultural production) and low-risk areas. This follows a cap of 7 percent of food-crop-based biofuels to limit their further growth in the ILUC directive of 2015 for the period until 2020 (EU 2015).

The remainder of this chapter focuses on the origins of the biofuel debate, which is the most controversial aspect of the RED. It is also linked to the FQD (EC 2009), the reform proposal on ILUC (EC 2012), the actual reform on ILUC (EU 2015), and the recast RED (EU 2018). The latter contains revised sustainability criteria, as well as the delegated act of the European Commission (2019), which limits how countries can count food-crop-based biofuels grown in high-risk areas for ILUC toward their nonbinding targets for renewable energies in transport. With this more detailed analysis, I provide insight into the relevance of scientific consensus and illustrate how disagreements between coalitions of policymakers affect learning and policy outcomes.

The Origin of Biofuels Policy

The biofuels component emerged from actions by different directorate generals between 2003 and 2009, with a less clear-cut focus on climate mitigation as the other two aspects of the RED. The multiple-purpose character of biofuels was a key reason why different coalitions formed after its relevance for climate mitigation became contested. The resulting biofuels controversy was not resolved until 2015, when the ILUC reform limited the amount of first-generation biofuels that could be counted toward countries' binding targets of renewable energy in transport to 7 percent (allowing an increase from the current level of 5 percent) and required additional biofuels to be from nonfood-crop sources such as waste (second generation). This was watered down subsequently in 2018 and 2019 by removing individual binding targets for member states. The recast RED introduces a cap moving into the 2020s of how much first-generation biofuel countries can count as renewable energy in transport under their voluntary commitments.

DG Agri was working on a biofuels strategy that resulted from the implementation of CAP reform, which included not only greening measures, but also reducing subsidies in the sugar sector (ENGO 1; European Council 2006a; Sharman and Holmes 2010):

> It all started with the sugar reform. . . . [Biofuels were] a new outlet for the sugar beet industry basically but they were going to get less money from the agricultural policy so developing biofuels was a way to compensate for that basically and if you look at documents from that time, like the first communications and so on

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> you really see that that's what they say and they don't even mention [climate objectives], or only in passing. . . . In the EU it was the agricultural policy that was the main driver [for biofuels]. (EC 12)

ENGOs pointed out that biofuels were used by the European Commission as a side payment or bargaining chip to win the support of the agricultural lobby for the sugar reform of the CAP. DG Agri "put together this Cabinet-level working group that was basically addressing biofuels as part of the response to the sugar reform that the Commission was pushing through" (EC 9):

> Commissioner Mariann Fischer-Bohl, who was wrapping up the sugar reform, which was one of the reforms she actually had to do, so she had huge opposition from the farm lobby, and she found the magic way of sugar coating, the deal of saying "we lower your guaranteed price of sugar, but don't worry, you'll make lots of money through biofuels, and there will be a bright new future, and there will be lots of subsidies coming from that direction." (ENGO 1)

DG Env developed the FQD (EU 2009b) between 2005 and 2007. In parallel, DG Energy explored in the biomass action plan (EC 2005) how the use of biomass could be improved, but "what it ended up being was very much a sort of selling job on why we needed more biofuels in transport, rather than looking at where it would be optimal to use biomass" (EC 9). A further policy development process that was running in parallel were discussions regarding the carbon dioxide emission standards of cars. Two directorate generals within the European Commission, as well as a number of actors ranging from the member states to the agricultural lobby and auto industry, pushed for a more reliable biofuels target to be more far-reaching than the current voluntary target of 5.75 percent (EC 10; ENGO 1; EU 2003a), while "at that point it was specifically biofuels and not renewables in transport" (EC 11) and "it got changed . . . in the process to renewables in transport" only later (EC 12).

When the European Council asked the Commission to develop a policy package to deliver on the 2020 20-20-20 Strategy, it also included a target for a 10 percent share of biofuels (European Council 2007, 21; EC 2008b). The targets, however, were based more on political objectives than on scientific data (Sharman and Holmes 2010):

> It was biofuels at the beginning and I think what happened is that was before they had assessed [different targets]. . . . It was a bit random to be honest. They said "Oh, well let's have something in the middle like 10 percent" and I think it also suited much of the modeling exercises [DG Energy/DG Agri] did to see how they could reach the renewables target. (EC 12)

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The timing of this discussion was crucial. They were initiated at a time when there was a lack of scientific data on the carbon emission performance of biofuels and environmental impact assessments that took the widespread use of food-crop-based biofuels into account and their effects on ILUC to agricultural land where crops for biofuel production replaced food crops. A shared assumption was that

> in 2003 it was fairly clear that there were clear greenhouse gas savings from nearly every process in biofuels and the consensus seemed to be that the indirect land use changes were insignificant, so that was 2003. I guess by the time we were drafting the directive that had changed completely. . . . The anti-biofuels arguments . . . certainly occupied us thoroughly from 2007 onwards. (EC 8)

Emerging New Scientific Evidence on the Climate Performance of Biofuels

Two groups can be differentiated in the negotiation process of the biofuels component. Members of the coalition that focused on economic development came predominantly from the directorate generals for Energy, Agriculture, and Trade within the European Commission, the biofuels industry, automotive industry, and conservative-leaning parties in the European Parliament, as well as from several EU member-states. Their focus was on the triple benefit of biofuels—increasing energy security, improving (rural) economic development and, as a side benefit, mitigating climate change in the transport sector. Their primary objective and policy design beliefs, however, were focused on the economic benefits of biofuels. This coalition was in charge of the biofuels target as part of the RED.

The second interest group was the environment-focused coalition. Members of this coalition came predominantly from the DG Env in the European Commission, the Green Alliance in the European Parliament, environmental and social NGOs, and a number of EU member-states. It was led by Cabinet/DG Env of the European Commission, which was in charge of the FQD.

The coalition focused on economic development designed the biofuel aspects of the RED based on the assumption that first-generation biofuels would address all three objectives. The European Council's decision of a mandatory target of 10 percent biofuels/renewable energies in transport resulted in a lock-in into that target. However, new scientific evidence was introduced into the debate between 2007 and 2010, which pointed toward an emerging understanding that the carbon footprint performance of biofuels was more mixed than previously thought, especially with regard to food-crop-based first-generation biofuels, which showed a worse carbon footprint than most fossil fuels (Fargione et al. 2008; Melillo et al. 2009;

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Searchinger et al. 2008). It also suggested a competition between food-crop-based biofuels such as maize and sugar, especially from biodiesel and food production for humans. This contributed to rising food prices in the developing world and a food versus fuel discussion that gained prominence in the media through social NGOs (Keyzer, Merbis, and Voortman 2008; Kullander 2010; Runge and Senauer 2007). These new findings challenged the relatively stable consensus that renewable energies were normatively good (Rietig 2019a). Yet until then, even the environment-focused coalition had been either indifferent to or in support of biofuels:

> The negative reaction first came from the social NGOs, and it took several years for environmental NGOs to take notice and to talk about the problem while saving face. Because it is also not possible that you are pushing for an ambitious target and two years later you are saying that the target is causing a problem. So they needed a few years and a few changes in personnel and terminology to explain themselves, but others who were not implicated in the early push in favor of biofuels, they were much quicker to react. (EC 10)

Until the new scientific evidence emerged, there was a consensus in the policy design and policy detail beliefs among most of the key actors that biofuels as a component of renewable energy were a suitable policy instrument to address climate change. Thus, new scientific evidence challenged the underlying policy design and policy detail beliefs that had formed between the 1970s and 1990s as a form of long-term constructivist learning. DG Energy and other actors primarily concerned with economic development acknowledged this new data but questioned the effect of biofuels on food prices:

> [Biofuels] have the highest criteria . . . to meet before they can be used. Everyone talks about using palm oils for biofuels, nobody cares that palm oil is used in our toothpaste, in cosmetics, in medicine, in lubricants and everything. And basically an only small fraction of about 3 percent ends up as biofuels. And everybody wants sustainability criteria for biofuels, but nobody cares about what happens to the rest. (EC 4)

Another key actor from the economy-focused coalition within the European Commission criticized a perceived overemphasis on the biofuels aspect, insofar as

> the timing was such that all sorts of practically everything was bad in the world was being blamed on biofuels. . . . The fact that EU biofuels demand was so trivial and barely significant didn't matter at all. People just saw high food prices and EU demand and said that it was EU energy policy driving all of this. (EC 8)

This resulted in conflict between the two coalitions with differing policy detail beliefs, which became evident as soon as the universally positive

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image of biofuels as renewable energy became contested. In particular, the environment-focused actors, such as environmentally minded departments within the European Commission, the EU member-states, and ENGOs, reflected on the new scientific evidence and subsequently changed their policy design beliefs on the climate performance of biofuels:

> It was also the scientific community that was having different ideas and giving contradictory advice, so that certainly did not help in giving policymakers a clear signal, and that was giving room to different lobbies to go for their own interests. So from a political perspective you had the agricultural lobby in favor, you had more the environmentalists being more concerned about the issues, but science was in a way not giving a clear signal to either of the two, and that caused a difficult discussion where the Commission [DG Energy] was quite dominant, because there was a lot of arguments going back and forth, and if the science is not very clear, then it is the Commission who can play around with that. (EP 4)

Shared and Competing Beliefs of the Coalitions

The controversy between the environment- and the economy-focused coalitions was based on diverging deeper, policy design, and policy detail beliefs related to the new scientific evidence. Actors shared the wider policy design beliefs that carbon dioxide emissions needed to be reduced to mitigate climate change, but they had very different perspectives on the policy details of exactly how this should be achieved and how scientific evidence should be interpreted. The cabinets/DGs involved could not find a common language to respond to the media debate during the drafting process in 2007–2008, as there was a lack of consensus within the European Commission regarding these policy detail beliefs:

> [The food versus fuel debate] took off during the year when we were drafting the Directive. And during that year, because there were different views inside the Commission, it was not possible for the Commission to externally express any opinion or even any scientific response to the statements that were being made. (EC 5)

The food versus fuel debate also affected the effectiveness of policymaking within the European Commission given the need to respond:

> The experience was rough and the timing [of the food versus fuel debate in 2007/08] was unfortunate. At one point I think two thirds of [the Renewable Energy] . . . Unit were occupied with bio-energy discussions and sustainability discussions so it took up a vast amount of effort and resources. (EC 8)

The coalitions disagreed about the biofuel component across the European institutions, mostly due to different underlying deeper and policy

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design beliefs. Similar to other policy areas in the EU and the US, each coalition included both governmental and nonnational representatives (Baumgartner 2007). These two groups had characteristics similar to Sabatier's advocacy coalitions (Sabatier 1988, 1998; Weible and Sabatier 2009), where coalitions with competing beliefs and policy objectives engage within an issue-related policy subsystem such as biofuels policy. The RED coalitions used different strategies to win over the other coalition and achieve decisions by governmental authorities that were in line with their underlying beliefs. The two coalitions used these strategies to align the policy outcome with their beliefs on the importance of acting on climate change (deeper beliefs), what overall policy approach should be taken (policy design beliefs), and exactly how the policy instruments should be designed (policy detail beliefs), whereby the scientific knowledge affected their positions differently. The key change compared to learning in the overall RED was the introduction of new scientific data in 2007–2008 that resulted in contested scientific evidence regarding first-generation biofuels' positive or negative contribution to climate mitigation. The biofuels controversy can be seen as a reaction to developments in the sociopolitical landscape: the introduction of new but contradictory scientific evidence and the overall negative public reaction to the discrepancy between the new evidence and the policy development.

There was a shared policy design belief among stakeholders and decision-makers that alternatives to fossil fuels should play a larger role in the European energy mix. However, the policy detail beliefs (i.e., the exact means of achieving this policy objective) became contested. The negotiations were more based on political horse-trading and policy-based evidence gathering (Sharman and Holmes 2010) than on scientific evidence (EC 6; EC 9; EC 12). The economy-focused coalition widely regarded biofuels as a desirable alternative to fossil fuels from an energy security, economic development, and increasingly climate mitigation perspective until 2008 (EC 1; MS 1; MS 4; MS 7; MS 8).

However, actors that were deeply involved in promoting all renewable energies as desirable policy instruments to address climate change did not explicitly change their policy detail beliefs. Some reflected on the evidence and decided to ignore it, thus engaging in defensive avoidance (Boucke-nooghe et al. 2007; Janis and Mann 1977), which was facilitated by group-think (Janis 1972) as they were in the driver's seat of negotiating the details of the legislative proposal (Rietig 2018a). It is important to recognize that the economy-focused coalition did not have the luxury of reflecting on the new evidence in order to change its position. Instead, actors entered

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defensive avoidance (Janis and Mann 1977) to avoid having to reflect on the scientific evidence. The option of reflecting on the new evidence and changing its position was closed as the scientific debate shifted toward a consensus on the negative impacts of biofuels *after* the economy-focused coalition succeeded in gaining a political mandate for the 10 percent target in the European Council in 2007, so it was locked into a position that was difficult to change without losing face (Rietig 2018b):

> What was also very clear that from the Commission's [cabinet/DG Energy's] perspective, they were already married to their 10 percent target so to say, so they didn't want a too fundamental discussion on the targets, because that was the basis of the RED, and they were afraid that if this discussion on the biofuels was getting too loud, it would also be fundamentally in the discussion whether the targets should be dropped or not. And therefore the European Commission was also very much pushing of keeping these targets and trying to downplay the scientific debate there. (EP 5)

While the environment-focused coalition understood scientific evidence from a positivist point of view, key actors in the economy-minded coalition pointed toward the competing scientific findings and the lack of scientific consensus between scientists from their triple-purpose food/energy security, economic development, and climate change perspective (EC 5; EC 9; EC 28; EP 5). Therefore, the scientific studies provided were viewed through a political lens in support of the political objectives that coincided with the interests of the industry and the agricultural lobby, as well as of many policymakers in the EU member-states, who had a high regard for rural development and energy security:

> There was also a debate on what to do with the specific target of the transport sector, and interestingly this was a kind of classical political deadlock we had there, because the politicians already agreed to come forward with a 10 percent target on renewables for transport, and politically it was already impossible to give up that target, that would have been seen as a loss of face, you know these kind of political issues that sometimes become more important than scientific arguments. (EP 4)

The different framing of biofuels subsequently offered the opportunity for power games to be played among the interest groups (Saurugger 2013). The lack of a clear scientific consensus either in favor or against biofuels opened the space for the interpretation of scientific studies in favor of political objectives (Weible 2008), what exacerbated the controversy:

> There was this study by Tim Searchinger in early 2008 and we started the discussion inside [DG Energy of] the Commission about what we should do and so

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> on. . . . It was very difficult for the Commission as a body to take into account the new scientific evidence because it questioned the legitimacy of the policy basically. (EC 12)

The political use of scientific evidence (Weible 2008) in support of predetermined political positions became particularly strong once the science was contested, and as a result of the lack of scientific consensus clearly pointing in one direction, the controversy worsened (Sarewitz 2004). The biofuels industry took advantage of this disagreement to introduce its own studies and evidence, using as the basis of their calculations "different factors for ILUC which funnily enough gave biodiesel quite a low ILUC factor . . . that certainly came out of nowhere (MS 11). This was confirmed by an observer from a large EU member-state:

> These governmental agencies are making a lot of scientific studies, as do we with our research projects, and then we pull a few numbers out that support our argumentation. And it has been confirmed that these studies are a good basis for [DG Energy's and] the Commission's argumentation to defend its proposal. (MS 4)

The proposal put forward by the European Commission for revising the biofuel aspects of the 2009 RED to take into account ILUC (EC 2012) indicates limited learning on the individual level, but to a lesser extent on the organizational level, as the ongoing negotiation deadlock between the coalitions illustrates. Changes in policy detail beliefs would have meant to take a stronger precautionary approach toward the use of biofuels and not simply to limit the amount of first-generation biofuels that can be counted toward the 10 percent target on renewable energies in transport. Instead, phasing first-generation biofuels out and only accepting sustainable biofuels would have evidenced changes in beliefs (as emphasized by ENGO 1; ENGO 2; ENGO 3; MS 7). Members of the economy- minded coalition did not change their deeper beliefs to acknowledge the overall planetary boundaries and negative environmental consequences of the dominant neoliberal economic development model. The reform of the de facto biofuels target remained incremental by limiting the future growth of food-crop-based biofuels to the existing share of 5 percent (EC 2012) and incentives for electric cars to move beyond biofuels to other forms of renewable energy in transport. The following quote illustrates that the expectation of some members of the environment-minded coalition for learning would have been a shift in deeper beliefs that should also be reflected in the policy proposals:

> This is where I think we have failed to learn certain lessons. Because if you look at the biofuels debate, yes, we have ILUC, we have certification, there is a certain recognition that we cannot use food crops biofuels, but this is where it generally

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> stops. And wherever you go, you hear that "yes, we have to do second generation, which will be based on cellulars, that is the next step." But people are not questioning if that is going to be the best thing. (EC 10)

The proposed changes to the directives indicate that there was no overall shift in deeper beliefs that would be reflected in the policy design and policy detail beliefs, such as proposing more substantial safeguards to the use of biofuels than accounting rules dictated in the form of the Sustainability Criteria shared by the RED and the FQD. Thus, none of the coalitions changed their deeper beliefs. Both continued to hold the same policy design beliefs that the problem of climate change needed to be addressed by reducing emissions and that renewable energies were a desirable policy overall to achieve this. We did, however, observe what appears to be a change in policy detail beliefs among the economy-focused coalition, as they allowed the European Commission to propose a modification to the RED.

Constructivist Learning or Factual and Experiential Learning?

Key actors pointed out that there was a difference in the RED between the ways in which policy officers as experts and higher-level civil servants such as heads of units, directors, and politicians learned (EC 2; EC 3; EC 4; EC 7; EC 14). Experts engaged deeply with the available academic literature and scientific studies in the policy field. The steepness of the learning curve depended on their previous knowledge. The higher-level civil servants and politicians learned predominantly from being involved in the policymaking process and attending meetings. Most had no deep expertise in the specific policy area but rather took on the role of managers, thus learning facts by being involved in the process:

> So when the industry comes to talk, they come to [the head of unit at the European Commission], and he always has an expert next to him. So he would give the general position and leave the specifics to the experts. If you do this a few times, you learn it. . . . So you have some people who are trained, you need a good briefing, and you need to trust your people. And the moment you have that, it goes well because you participate in the meetings, you hear the NGOs and the industry speak, you hear what positions your technical and policy guy gives, and of course they are not stupid, so if you are interested in your job, you learn. So for all of them, there is a learning process. They have to be involved. (EC 4)

This form of experiential learning on the individual level by being involved in discussions was confirmed by another technical expert:

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> I guess to some extent once the subject matter becomes quite technical then the head of unit is happy for their expert task officer to play a role because they don't necessarily know the material so sufficiently to be familiar with all the ins and outs and all the arguments so sometimes it has to happen because it's technically complicated. (EC 8)

Yet it was problematic when top-level decision-makers relied only on the information they received from their experts, as it had been filtered in the process of summarizing complex technical issues into briefing notes or short overview presentations (EC 4; EC 9; EC 12). Especially if there was no scientific consensus, technical experts may have been tempted for personal or political reasons to provide information that was biased in favor of one side. This carries the possibility that higher-level decision-makers learned only what they were taught (Bomberg 2007; Haas 2000). This may have been unintentional, especially when the value-laden character of science is taken into account (Jasanoff 1990, 2004).

But even among those who could be considered experts with detailed technical knowledge on specific subelements, experiential learning on the individual level occurred due to their continued involvement in the negotiation process and debates among the competing coalitions:

> Also having to argue about it year after year. Those experts who were involved in this, they just could not but learn from each other. I learned a lot from it and I realized issues that I did not consider as important before are important and some were confirmed, some were not, so it is an interesting exercise that will make an impact. The problem here is how you can make others accept what you have learned. That is a more difficult thing because you have to go through this process to appreciate certain factors, and it is very difficult to communicate this in a simplistic fashion to hierarchy or to outside stakeholders, because it is not so trivial. And this is why still so many people deny certain things. (EC 10)

This type of experiential and factual learning on the individual level, however, remains the rather normal learning that automatically occurs in any policymaking process. Of course, individuals accumulate information and experience by being involved. Yet as they need to defend their policy detail beliefs in discussions with the other coalition, actors look for evidence to support their arguments, examine the issue from different angles, and thereby also reflect on their own policy detail beliefs. While there is no conclusive evidence that the actors involved changed their policy detail beliefs (which would be constructivist learning), they did acquire more knowledge by looking for supporting arguments and evidence and also learned by being involved in the process and tried to improve their strategies in influencing the policymaking process. There is insufficient evidence

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supporting the conclusion that individuals within the economy-focused coalition changed their beliefs. However, even if they wanted to, their path-dependent lock-in to the 10 percent target would have meant losing face, which was avoided by entering defensive avoidance (EC 4; EC 12):

> I think the whole thing had gotten really emotional. . . . I also think there was this sort of psychological mechanism of denial, you know, that you don't want to admit a piece of evidence that goes against what you really think is right. (EC 12)

Another aspect of defensive avoidance that occurred in the Council discussions regarding a policy reform of the ILUC was the fact that in the meantime, EU member-states invested in an industry focusing on first-generation biofuels. Changes to the RED thus came with significant economic cost and loss of trust in policymaking:

> Like especially I think the Central and Eastern European countries, they haven't had the same boom in . . . wind, but biofuels—they've done really well in so I think it's quite frustrating then to have the rug sort of swept out from under their feet. . . . I don't think they really recognize the need to change their direction. (MS 11)

Members of the economy-focused coalition, however, changed the way they behaved in the negotiations in a manner that could easily be confused with constructivist learning. This type of experiential learning about how to best protect deeper beliefs by optimizing political tactics is frequently referred to as political learning in the literature (e.g., Gross Stein 1994; Holbrook 2007; May 1992; Nadeau, Niemi, and Amato 1995). However, this kind of experiential learning is to be expected in any policymaking process. The economy-focused coalition were careful to acknowledge the need to address ILUC between the adoption of the RED (EU 2009a) and the ILUC proposal (EC 2012):

> Yes, [there was reflection and learning in DG Energy at the Commission]. I think the argument has become a bit more nuanced, a bit more aware of the complexity and the sensitivity of it all. . . . It's clear now that we had a huge increase in world food prices in 2008–2009, which was triggered by a range of bad harvests, bad weather, and rapidly growing food demand. Food prices came down again so in that sense the absence of the correlation with EU biofuels demand is there. (EC 8)

Also:

> We learned a lot more about the land use stuff in the years after than we did at that time, so I could not really say that I learned it in the period that I was talking about. (EC 5)

A key actor reflected during an interview on lessons learned from being involved in the biofuels controversy and how it could have been managed differently to reduce the level of conflict:

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> Hindsight is useful. We took a very sectorial approach to dealing with the biofuels issue. It's quite complicated, which made it difficult for people to understand and created quite a bit of hostility. I think it would have been better to take a much broader approach to the idea of sustainability in agriculture and forestry rather than focus purely on biomass in energy. (EC 8)

However, this change in tactics to acknowledge the necessity to address ILUC in the area of biofuels (EC 5; ENGO 1) was a result of experiential learning rather than constructivist learning based on changing underlying beliefs. By being involved in the negotiation process between two coalitions, actors also learned that "you have to give things and you can't just say no and defend everything. Then the things that you do defend are more credible" (EC 5). Consequently, a shift in the negotiation position can also be the result of experiential learning on how to play negotiation tactics better under the involvement of long-term considerations or the protection of deeper beliefs and important policy design and policy detail beliefs. This point is illustrated by the observation of a member of the competing environment-focused coalition that "the fact that many people have realized that they won't simply convince public opinion has also contributed that it is better to come up with some corrections, amendments or improvements" (EC 10). Thus, there was also overall support within the European Commission for a correction of the RED on the ILUC aspects:

> On the ILUC side the whole impact of the first generation feedstock and the potential for bad practice and higher emissions coming from that process has meant that there has been an overall agreement to try to limit the use we make of first generation in preference of second generation so that's the key element of the ILUC proposal I guess is that we're proposing to cap first generation and then provide extra incentives for second generation because they are generally better and more reliably sustainable than 1st generation so in that sense there's a bit more clarity but not complete clarity on the issues, on the evidence, on the complexity of the relationships and that's, I think, the ILUC proposal shows progress compared to the discussions of the renewables directive and the sustainability criteria there. (EC 8)

Public opinion may have been a major outside motivation for policymakers to reconsider their policies. Especially in the case of biofuels, where the public debate and public criticism regarding the indirect land use factors remained and was further underpinned by a an emerging scientific consensus toward the mixed climate performance of biofuels and their negative impact on food security (EC 28; Keyzer et al. 2008; Kullander 2010), there was considerable pressure on the economy-focused coalition to make concessions regarding ILUC. This, however, does not automatically mean

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that the coalition changed their policy detail beliefs. It may have just been a tactical move based on public or political pressure or their gaining experience regarding the unintended consequences of the original policy by observing its effects over several years:

> And because of the complexity of all this, there was an increasing realization, but with [DG Energy] as well, they learned to be more careful with certain things because higher prices can undermine a policy and it's not necessarily good, if you get too much, at some point it may come back and haunt you. I think people have become more considerate about unintended consequences. Much of the ILUC discussion was about that thing in that sense. . . . So it's not just to get the right numbers in the model, but also more fundamental discussions about population growth, future demands and so on. It made people think in a more nuanced way, so there was some kind of learning effect from the Renewable Energy Directive in the ILUC discussions. (EC 11)

There is also evidence for experiential learning on policy instruments, resulting in better familiarity with the implications of the various instruments available in biofuels policy:

> There's been a lot of learning in terms of the different instruments that were used and that's one of the things that will be coming out in [the next Commission] guidance, the need for much greater flexibility in market responsiveness of instruments to be able to reflect things like the reduction in costs . . . from the scaling up of industrial activity producing renewables. (EC 8)

The environment-focused coalition did not only change their policy detail beliefs based on the new scientific evidence that was contrary to the assumption that all renewable energies contribute to climate mitigation, some of their key actors also reflected on the learning experience, which can be regarded as constructivist learning on the individual level and to a certain extent also on the organizational level within the respective government/European Commission departments:

> I mean people have been a bit traumatized with this file [the biofuels aspect of the RED]. . . . Everybody in the DG was telling me, "Oh, it's the worst file I've ever seen." . . . It was extremely difficult and there was a lot of disgrace put on the Commission as well when you have [to] admit that you've made a policy that doesn't make any sense which results go contrary to the objective. It's very difficult. . . . The Commissioner [said during] an official [when he] . . . was talking about . . . another hot topic . . . "Yeah, we need to make sure we take France into account because [we] want to avoid another biofuels disaster." (EC 12)

A representative from the Council concluded on the RED that "we put in place a policy that has massively incentivized the development of an

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industry and we didn't take into account the full impact, and this needs to kind of be corrected" (MS 11).

Based on this discussion, it can be concluded that by participants being involved in the policymaking process, there was experiential learning among all policymakers, as well as an increase in knowledge about the specific policy issues during the drafting and negotiation period of the RED and the FQD. However, experiential learning also occurred afterward, as actors reflected on the increasing scientific evidence in favor of the environment-focused coalitions' policy detail beliefs.

This is the most relevant finding on learning: the environment-focused coalition changed their policy detail beliefs, but this resulted in a "fierce fight" (EC 12) with the other coalition, which did not regard the contested scientific evidence as sufficient to adopt a precautionary approach, especially as they were already locked into its policy development path before the scientific evidence emerged. The other hindering factor was the different framing of biofuels, as they were seen not only from an environmental or climate change perspective, but also in terms of their economic benefits.

The key finding in the analysis of learning on the individual level in transport policymaking is that no changes in either deeper, policy design, or policy detail beliefs could be identified and clearly process-traced to the key individuals involved in the economy-focused coalition, although the proposal on ILUC of the European Commission would suggest so at first glance. On the individual level, this was not a result of constructivist learning but of political learning, both in terms of experience and knowledge, among key actors that became locked into a policy pathway due to insufficient information at a crucial time:

> We were also at the end of the era where we had huge food surpluses and very low food prices so that wasn't even an issue on people's radar when we first quoted biofuels, and circumstances have changed considerably since then so I guess it's not only the learning that goes on through the analysis which is triggered by the political debate, it's also, as with all social sciences, the circumstances, the environment in which we're working changes and that has a very significant impact on the interrelationships with the policy and what the policy does in the real world. If there's not static as well as our own learning, the whole circumstances of global food production, food demand, have changed significantly. (EC 8)

Overall Learning in the Renewable Energy Directive and the Biofuels Controversy

This chapter examined what aspects of learning occurred, as well as the extent to which learning influenced the policy outcome by applying the

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LGF and the methods for data collection and analysis presented in chapter 2. The focus was on an aspect of the RED that resulted in considerable disagreements within and beyond the European Commission. I have provided a detailed analysis of overall learning in the RED elsewhere (see Rietig 2018a). The central findings in Rietig 2018a were that in particular, factual and experiential learning occurred on both the individual and organizational levels due to individuals being involved in a policymaking process and having the opportunity to deepen their knowledge on preexisting areas of expertise. Table 4.1 summarizes those key findings.

The biofuels controversy illustrated that learning is not necessarily always positive, but in particular, experiential learning on how to manipulate the political decision-making process more effectively can have normatively negative, unintended consequences. This can happen when policymakers learn how to use the supposedly right scientific studies to support the desired position, they learn how to push proposals through the European Parliament and Council working groups, and especially when scientific knowledge is contested instead of consensual (Dunlop 2010; Sharman and Holmes 2010). Especially on the organizational level, alternative explanations such as power politics, normal bargaining tactics, and the prevalence of powerful vested interests voiced by lobbyists remained dominant compared to learning.

Even if individuals in the biofuels controversy had learned and as a result of strong personal beliefs, they pushed the issue forward using negotiation tactics, power, and personal relationships to accomplish their objectives. Convincing others of the importance and desirability of their objective would have clashed with their national or political interests. Even if individuals reflected upon other individuals' persuasive proposals and changed their underlying beliefs, they may not have been able to act on it in a coherent manner. This was especially the case for the economy-focused coalition, which was tied to the Council's decision of a mandatory 10 percent target. Table 4.2 summarizes the findings on the biofuels controversy.

Actors engaged in behavior that could be termed as strategically dealing with input to avoid deeper reflection. Instead, they engaged in experience-based learning how to better protect deeper and policy design beliefs to avoid adjusting these beliefs to the new input—in short, they preferred defensive avoidance due to organizational or political hindering factors such as policy lock-in and path dependence.

Previous contributions examining the emergence of the biofuels aspect of the RED restricted their analysis to a normative environmental perspective, examining the biofuels controversy from the point of view of the

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Table 4.1
Overview of findings on learning in the RED

	Factual Learning (gaining knowledge)	Experiential Learning (gaining additional experience)	Constructivist Learning (change in underlying beliefs)	
Individual level	Senior-level actors gained expertise on renewable energy	Members of European Parliament as well as actors at the Commission and in the Council gained experience by working on the RED, but overall limited, as few key actors were deeply involved (several of whom were already experts)	Deeper beliefs	Limited change: UK head of state formed deeper beliefs on importance to act on climate change
			Policy design beliefs	No change
			Policy detail beliefs	No change: Defensive avoidance among economic-focused coalition against acknowledging scientific evidence contrary to policy detail beliefs
Organizational level	Actors reflected on information about available policy instruments and other actors' positions	Reflection on several stages of renewable energy development (2001, 2003, 2007–2008) and national renewable energy policies (e.g., UK, Germany); additional experience with renewable energy policies	Deeper beliefs	No change in European Commission's deeper beliefs on European integration and harmonization
			Policy design beliefs	No change on policy design belief triangle of improving economic competitiveness, climate change, and energy security
			Policy detail beliefs	Strategic change: European Commission adjusted some policy instrument choices to protect its policy design beliefs

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Table 4.2
Overview of key findings on learning in the biofuels controversy

	Factual Learning (gain in knowledge)	Experiential Learning (gain in experience)	Constructivist Learning (change in underlying beliefs and perspective)	
Individual level	Increase in knowledge among experts and higher-level decision-makers by being involved in the process and having to engage with details in order to defend their position in negotiations	Learning by doing, learning to play negotiation tactics better and to agree to opposing coalitions demands on minor issues to hold their position on more important issues closer to policy detail, policy design, and deeper beliefs	Deeper beliefs	No change: Remained stable on understanding that climate change exists and needs to be addressed; priority of economy-focused coalition remained with energy security/ nonclimate benefits of biofuels
			Policy design beliefs	Yes: Change in short term among individuals in environment-focused coalition by correcting their beliefs about the appropriateness of using biofuels to address climate change
			Policy detail beliefs	Yes: Among environment-focused coalition to align with policy design beliefs (removal of biofuels target) No change: Defensive avoidance among economy-focused coalition to acknowledge scientific evidence contrary to policy detail beliefs, medium-term minor policy detail belief adjustments on ILUC and need to limit first-generation biofuels

(*continued*)

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Table 4.2 (continued)
Overview of key findings on learning in the biofuels controversy

	Factual Learning (gaining knowledge)	Experiential Learning (gaining additional experience)	Constructivist Learning (change in underlying beliefs)	
Organizational level	Yes: Increase in knowledge due to emerging scientific evidence on the negative environmental impacts of biofuels	Yes: By being involved in the process, improved experiential learning as more decision-makers were involved in the discussion as usual because the disagreements between the coalitions required intensive debate; also more people involved as biofuels policy was split across several directives with different directorate generals in the lead, resulting in new/changed positions of organizations (European Commission, NGOs)	Deeper beliefs	No change in either coalition
			Policy design beliefs	Yes: Change in long term for both coalitions via formulating beliefs that climate change exists and that policy must react with legislation Change in short term among environment-focused coalition by correcting their beliefs about the appropriateness of using biofuels to address climate change
			Policy detail beliefs	Yes: Environmentalists reflected on evidence and changed their beliefs; No: Defensive avoidance among economy-focused coalition as 10 percent target had been set politically by Council

environmentalist coalition (Palmer 2015; Sharman and Holmes 2010), or to an application of Sabatier's Advocacy Coalition Framework (ACF) and shifts between subsystems (Rietig 2018b). With this analysis, I widened the scope for understanding the link between learning and policy failure from a perspective of contested beliefs, which result in different interpretations of scientific evidence. The moderate outcomes of the 2010s reforms with regard to ILUC and trying to limit how first-generation biofuels can be counted into renewable energy targets in transport also highlight the difficulties of escaping policy lock-ins and path dependencies that were created during periods of scientific uncertainty in the late 2000s. It highlights why such subsequent reforms are limited to incremental changes that try to revert unintended consequences of initial policy failures gradually over decades.

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5 Learning in Policy Reform Processes: Early Greening of the Common Agricultural Policy, 1985–2003

Greening the CAP is an example of CPI over a longer time period—it dates back to the 1980s and thus offers insights into learning in policy reform processes beyond the ten-year time frame. I focus on the 2002–2003 Fischler Reform as a major policy reform that resulted from learning in the 19980s and 1990s. In the first part of the chapter, I provide an overview of the policy developments and changes in the overall sociopolitical landscape with regard to shifting public opinion on European agriculture and the beginning of greening the CAP in the late 1980s and early 1990s. In the second part, I evaluate the extent to which various elements of learning influenced the 2002–2003 Fischler Reforms as the most far-reaching, yet unconventional reforms that set the CAP on a new pathway toward combining economic with environmental objectives.

Greening the Common Agricultural Policy since the 1980s and Shifts in the Sociopolitical Landscape

Greening in the 1980s and 1990s

In 1985, the concept of ecological set-aside areas and premiums for environmentally friendly practices beyond compliance was introduced on a voluntary basis when the president of the European Commission, Jacques Delors, and the European Commissioner for Agriculture, Frans Andriessen, recognized the negative environmental impacts of intensive agriculture as one of the CAP's policy failures (Feindt 2010, 303). The green paper emphasized the "choice of society in favour of a 'Green Europe'" (Commission of the European Communities 1985, II; Feindt 2010). This green paper set out a number of major reform elements that the CAP followed over the next twenty-eight years.

The reform headed by the European Commissioner for Agriculture and Rural Development, Ray MacSharry, in 1992 marks the formal introduction

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of environmental considerations into the CAP (Daugbjerg 1999; Daugbjerg and Swinbank 2007). It coincided with an increasing public environmental awareness in the run-up to the 1992 Rio Earth summit (EC 25; ENGO 9) and a rising interest of green nonnational actors in agricultural policy. The green movement strongly criticized the negative environmental consequences of intensive agriculture, which prompted MacSharry to strongly emphasize farmers' crucial contribution to a vivid rural society and their central role as stewards of the environment, in an attempt to win support from the green movement (Moehler 2008, 78). The 1992 MacSharry reform responded to the environmental movement's criticism in three ways. The key aspect was a shift from encouraging intensive agriculture to supporting extensive agriculture. This included replacing price support with direct payments to farmers. Furthermore, setting aside land as a carbon sink and to support biodiversity became obligatory, which was seen as a major change in the policy paradigm (EC 21; EC 24; EC 25). Member states could reward farmers for going beyond the minimum requirements for good agricultural practices with the agri-environmental program and penalize insufficient compliance with environmental protection requirements via reducing direct payments, using the cross-compliance mechanism (Daugbjerg 2003; Moehler 2008).

In 1995, the Council requested the European Commission to propose a set of reforms that would prepare the EU for the environmental, economic, and social challenges of the twenty-first century, including the introduction of the single currency, the enlargement to more than twenty-five member states, and the reform of the CAP (Feindt 2010). This resulted in the Agenda 2000 reforms. The run-up to the Agenda 2000 reforms coincided with the Cardiff process on EPI, which also required the Agriculture Council to revise its contribution; meanwhile, the environmental outcomes of both the MacSharry reforms and the Cardiff process remained far behind these aspirations (Feindt 2010, 305).

The Agenda 2000 reform was prepared by the European Commissioner for Agriculture and Rural Development, Franz Fischler, and was adopted in 1999. It continued the 1988 and 1992 reform direction with the objective of making the CAP more acceptable to the average citizen and consumer via higher direct payments and further price cuts (Swinnen 2008a). The instrument of modulation served the purpose of decreasing incentives for intensive agricultural production. It allowed member states to cap the premiums paid to farmers by up to 20 percent and to redirect these funds to the new second pillar on rural development. Key aspects included the introduction of such a second pillar on Rural Development, which supplemented the direct payments to farmers in the first pillar. The second pillar also contained further

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environmental measures on a voluntary basis; its overall financial volume, however, remained less than 10 percent (Daugbjerg and Swinbank 2007, 8; Feindt 2010, 305). There were interdependencies to the trade negotiations, especially as the CAP reforms facilitated the 1994 General Agreement on Tariffs and Trade (GATT) (Syrrakos 2008, 117). However, the EU's chief negotiator in the Uruguay round also emphasized that the GATT/World Trade Organization (WTO) negotiations were a side effect (Pirzio-Biroli 2008) rather than a key motivation, as hypothesized by some academic contributions (e.g., Olper 2008; Swinbank and Tanner 1996; Daugbjerg and Swinbank 2007). EU internal considerations were more relevant drivers for CAP reform.

In the 1990s, the public debate shifted, as various food safety crises, such as bovine spongiform encephalopathy (BSE), better known as "mad cow disease," and the dioxin scandal, became a major public concern, along with an increased awareness of the need to improve standards on animal welfare (Moehler 2008). At the same time, ENGOs and consumer organizations began agricultural lobbying in Brussels and in the EU member states. This new group of actors worked closely with the media and were seen as representing wider public concerns (Nedergaard 2008). Their presence changed the policymaking dynamics, which until then had been dominated by the farm lobbies influencing their member states' ministries for agriculture within the Agriculture Council of Ministers and the DG Agri in the European Commission (Swinnen 2008b, 142).

ENGOs based their criticism on scientific studies that confirmed the negative environmental effects of agricultural production and criticized its negative implications for biodiversity and cruel practices regarding farm animals (ENGO 1; ENGO 2; ENGO 3; ENGO 8; ENGO 9). They used this knowledge to build momentum and convince society and decision-makers on the national and European levels via the media, conferences, and direct discussions to take into account wider societal perspectives and to question the business-as-usual industrial agricultural production, with its negative effects on the environment and food safety:

> I think certainly the NGOs shifted their positions. I think this is a very important point. It was not only about agriculture which damages the environment, but also the role that agriculture plays in terms of land management, biodiversity and so on. Certain NGOs became very strong advocates in terms of a certain type of farming. . . . Good agriculture needed to provide a service to society. (EC 25)

They worked together more intensively to "form common positions and then we go to the decision-makers with these positions, most of the time . . .

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try[ing] to harmonize at least those positions also with other [environmental] organizations" (ENGO 2). This increased coordination and professionalization allowed ENGOs to form a counterbalance to the agricultural industry lobby. They articulate environmental interests by taking on the role of teachers (Bomberg 2007; Haas 2000) who educate policymakers and the public by disseminating information on the negative environmental and social effects of agricultural policy. The line between teacher and lobbyist blurs with political demands for environmental focus areas, cross-compliance, decoupling, and farm payments from agricultural production. ENGOs succeeded in influencing the European Commission to integrate these aspects into the 1992, 2000, and 2003 CAP reforms and to gradually tighten their applicability with the subsequent reforms (EC 14; EC 19; EC 24; EP 4).

A key prerequisite is that ENGOs established a high level of trust with representatives of the European Commission so that they could be trusted to safeguard confidential information and act with high integrity. The European Commission saw them as having "very convincing arguments, and they certainly have a much stronger control over public opinion, a much better support in public opinion therefore than most farmers' organizations" (EC 24). Yet the imbalance between environmental and agricultural lobbyists involved in the CAP reforms is remarkable. Of the dozen major ENGOs represented in Brussels, only a few are involved in the CAP reform discussions deeply enough to effectively carry out lobbying work and engage with the European Commission on the technocratic level:

> [It is only] a handful that are really on the fight, I am not talking about people who come to meetings and follow because they don't add anything, they don't, they put their logo once in a while but they don't do any of the real footwork. (ENGO 2)

With the overproduction of the 1980s, worries regarding food security gave way to worries about food safety, especially regarding beef, pork, and chicken. Food safety became a major issue of European concern with the BSE crisis of 1996 (Moehler 2008, 79). In particular, the food scares of the late 1990s and early 2000s such as BSE and dioxin, severe acute respiratory syndrome (SARS), foot-and-mouth disease, and the high use of antibiotics in animal feed raised questions of negative implications for human health. This sparked an interest in food production, which resulted in an increase in media reports and shifting public opinion, as well as increased consumer demand for organically produced food and higher food safety standards (Nedergaard 2008). The food scares pushed food safety and agricultural production higher on the political agenda, where it in turn influenced public

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opinion and resulted in reflection processes, as food scares were "still a top priority of EU citizens. Regardless of what the CAP really had to do with these food scares, the political reaction was to put these problems at the top of the agenda" (Olper 2008, 89). The media supported a change in public opinion, giving "the impression that there is something wrong with our farming industry" (EC 24). Thus, a number of different factors opened a window of opportunity:

> There was, you know, a great increase in the criticism on the CAP's impact on the environment, but also food safety and the various crises alerted people. Also, the argument about wasteful production in agriculture and . . . this idea that I think Fischler was attached to, the family farm providing a certain role in society. And I think public opinion, this idea of organic farming, and I think you also had a general criticism of the CAP as wasteful. (EC 25)

As a result, factors such as the perception that the CAP had negative environmental impacts, the increasing concerns around food safety, and the difficult relationship with EU trade interests led to the impression shared by policymakers, ENGOs, and media alike that "the CAP had lost its legitimacy among the EU public" (Swinnen 2008b, 143).

Common Agricultural Policy Reforms of the 2000s

Due to the EU's enlargement process and the "partial failure of the Agenda 2000 reforms" (Olper 2008, 86), provisions for a *Mid-Term Review* in 2002–2003 were included in the Agenda 2000 decisions. Commissioner Fischler used the *Mid-Term Review* to introduce more far-reaching reforms of the CAP, which were even coined as radical by key actors and observers and facilitated by a window of opportunity (Swinnen 2008a). The Fischler Reforms changed the policy instruments toward the introduction of a single payment scheme by further decoupling farm income from production (Moehler 2008, 78). Farmers were allocated payments per acre of land regardless of production (Olper 2008, 87). It also strengthened cross-compliance, as payments became conditional upon farmers' compliance with environmental and food safety rules, animal welfare regulations, and overall sound environmental practices (Daugbjerg and Swinbank 2007, 8). However, as in the previous reforms, unavoidable compromises with the member-states watered down the original proposals considerably (Swinnen 2008a).

Three interest groups influenced the policy outcome of the CAP (Nedergaard 2008). ENGOs can be regarded as members of a coalition calling for ambitious and far-reaching CAP reforms. Lobbyists from the agricultural industry confirmed that their influence decreased in the 1990s and 2000s

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(Industry 4; Industry 5), while ENGOs became a counterbalance to the agricultural industry's status quo coalition, which retained close links to several agriculture ministries in the member states (Nedergaard 2008). Greening and the need for reforming the CAP emerged as intrinsically motivated processes within the European Commission, which were not linked to the ENGOs' lobbying activities, but rather coincided with them.

Greening served as a convenient argument for the European Commission to justify its reform course, aimed at maintaining the CAP (ENGO 9). The European Commission's interests could be best described as a moderate reform coalition (Nedergaard 2008) with the ability to steer the reform process. When compared with the MacSharry reform in 1992, the 2000 and 2003 Fischler reforms (Feindt 2010; Nedergaard 2008; Swinnen 2008b) could be understood as a continuation in the shift toward a public-goods model (EC 21; EC 22; EC 25). Different actors questioned whether European agricultural policy should be organized through a system of subsidies and public monetary transfers at all (Nedergaard 2008). Especially finance ministers in the member states, ENGOs, social NGOs involved in developing countries, and major trade partners voiced their demands to "scrap the CAP" (ENGO 5) more or less forcefully since the 1980s (Moehler 2008; Pirzio-Biroli 2008, 104; EC 21; EC 24).

The rationale behind the unacceptability of the impact and price support model was the argument of public money for public goods, requiring strong justification why the public should subsidize a policy with negative environmental impacts that seems to benefit only a few. The key argument was, "Why waste public money when people don't do what they are supposed to do? . . . Why should we waste good public money that is so scarce to subsidize one sector out of many sectors, and at the same time they are undermining all the environmental values?" (EC 14). While the motivations and associated worldviews behind this demand were very different, ranging from market liberalization and open competition to environmental considerations in favor of the polluter pays principle, governmental actors saw this coalition's coherent demand as having had an impact on public opinion (Nedergaard 2008; Swinnen 2008b):

> What is clear from opinion polls . . . throughout Europe is that citizens want a more diverse landscape, that agricultural policy should not only pay subsidies, but link these to public services. In this aspect citizens became more sensitive, on the issue that they are paying for something with taxes, the farmers can have this support, but we can expect a little in return. . . . I think the public became a little more political. (MS 4)

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The coalition in favor of abandoning the CAP and introducing a new, more market-based form of agricultural policy became strong enough to convince top decision-makers that the only way to save the CAP would be to justify its existence by changing its objectives toward a public goods model. This was achieved by trying "to change the image of the European agricultural sector as a major polluter jeopardising long-term sustainability, into that of a conservationist emphasising quality, health, and sustainability" (Pirzio-Biroli 2008, 103). The main instrument of choice was decoupling farm payments from the production and conditionality of the subsidy payments upon cross-compliance with environmental regulations:

> Decoupling was driven by a number of different concerns, I mean; it is an idea which time had come. . . . In terms of the cross-compliance, this was once again something that was called for by environmental groups, but at the same time, it fitted into this idea that policies should be more in support of environmental expectations. (EC 25)

Corrado Pirzio-Biroli, the European Commissioner for Agriculture's head of cabinet and key architect of the Agenda 2000 and the 2003 Fischler Reforms, pointed out the following changes in European public opinion, and thus in the sociopolitical landscape, as major drivers for pushing the CAP reform forward to increase popularity and avoid budget cuts:

a) farmers had become a tiny minority, and farm organisations lost dynamism and clout;
b) the widening of the EU and the proliferation of its policies against growing EU budget stringency had increased the competition for funds within both the Commission and the Council, as well as within the European Parliament;
c) the image of the farmer, large and small, had become that of a polluter, although this was not directly because of the CAP, but because of the industrialisation of agriculture, which the CAP had entertained; and
d) the CAP no longer had the votes to continue the status quo. (Pirzio-Biroli 2008, 102)

Thus, the motivation to introduce greening objectives into the CAP can be seen both from an environmental perspective and as a tactical move in response to, or at least in anticipation of, perceived changes in public opinion to further tolerate its continued existence. A representative of the agricultural industry concluded on the motives for introducing environmental objectives that these resulted

> more out of necessity than design. . . . The Fischler Reform in 2003 again was out of necessity to ensure that if you had a decoupled payment, it would have to be

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> attached to something which meant that this concept of cross-compliance was introduced . . . , that opened really the door for a wide discussion about the role of the CAP into the great environmental benefits, and of course you've got a very vocal environmental lobby led by Bird Life International in particular, but [World Wildlife Fund], Friends of the Earth, and other organizations who were all trying to ensure that more public money is spent on environmental causes and the CAP is a big source of public money at European levels. . . . Our hope is that we can ensure that it's delivered in a way that doesn't compromise the competitiveness of farming businesses. (Industry 7)

Policy change in the CAP was a result of shifts in the sociopolitical landscape throughout the 1990s and early 2000s. ENGOs emerged as a counterbalance to the agricultural industry. The food scares of the 1990s and subsequent shifts in public opinion were articulated via the media, which in turn influenced how politicians and high-level civil servants perceived public acceptance of the CAP. This opened windows of opportunity for policymakers to reflect on the CAP and reconsider the most criticized elements, in terms of both detailed policy instruments and the wider goals and objectives of the policy. Such changes in the sociopolitical landscape can be drivers of policy change. The wider public (i.e., voters), politicians, civil society, and representatives of interest groups influenced the key actors. The media was a key intermediary between civil society and politicians, as it conveyed messages that were frequently framed by interest groups.

Learning on the Individual Level

The shifts in the sociopolitical landscape since the 1980s resulted in a continuous reform process and opportunities for individuals in the European Commission and the wider European policymaking community to justify greening. These changes can be regarded as a driver for learning, but not as learning itself. Factual learning among decision-makers occurs when individuals reflect on an input such as new information, and their expertise increases as a result. Experiential learning occurs when an individual reflects on being involved in a policy field, and thus accumulates working experience or learns how to maneuver the political process to influence policymaking. The most obvious learning on the individual level is experiential learning among those involved in policymaking. It occurs as soon as policymakers reflect on their experience and learn by doing (see chapter 2).

This section examines the extent to which individuals learned in CAP reform processes between 1985 and 2003, with a focus on Fischler reforms. Learning is measured as a change in knowledge, experience, and/or beliefs

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at the time of the policy outcome compared to when the actor became involved with the policy.

Learning among Key Actors in the European Commission

Factual and constructivist learning remained incremental in the European Commission due to high levels of existing knowledge and formed beliefs. Civil servants in both the DG Agri and in the European Commissioner's cabinet had very high expertise in their field and usually more than ten years of experience working on CAP reforms. Especially the policy subfield of agricultural policy, and the CAP in particular, have been a domain of specialization that encouraged a close-knit network of experts. Almost all individuals involved in the close decision-making circles studied agricultural economics or agronomy and frequently held PhDs and postdoctoral qualifications in agricultural economics or related fields. Furthermore, several of them were farmers themselves or grew up on farms, so they were also familiar with the situation on the ground, at least in their home countries (e.g., EC 20; EC 21; EC 22; EC 24; EC 25). Thus, they closely reflected on new input that they were presented by external experts, stakeholders, and interest groups from a peer-reviewer perspective, and also constantly asked how the information was relevant to their immediate task of CAP reform (EC 14; EC 16; EC 21; EC 23; EC 24; EC 25).

European Commissioner Fischler as Policy Entrepreneur: The Fischler Reform

Franz Fischler is frequently portrayed as an outstanding example of a policy entrepreneur who acted as a key architect by using various negotiation strategies and tactics to ensure the success of "his" reforms—the Agenda 2000 reform and the 2003 *Mid-Term Review*, which is widely known as the Fischler Reform (Feindt 2010; Nedergaard 2008; Swinnen 2008a). Through policy entrepreneurial activities and carefully controlling what and how much information the Council of Agricultural Ministers was provided prior to the negotiations, Commissioner Fischler controlled the policy process:

> Throughout all of the reform talks, Council reluctance had been addressed by Fischler and a "green team" with one spokesman for each member state drawn from the cabinet and the DG for Agriculture informing the relevant stakeholders and public opinion. Fischler and his staff went on the offensive, participating in literally hundreds of conferences and in interviews by all sorts of national and regional media, as well as through contacts with nongovernmental organizations. The aim was to let reluctant ministers realize that society at large demanded a less

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> bureaucratic and more environmentally-friendly agricultural policy, and a shift from market-distorting support towards rural conservation and renewal. (Pirzio-Biroli 2008, 108)

A member of Fischler's team commented on the Commission's reaction to their drafting process by pointing out Fischler's strategic role in avoiding large controversies within the European Commission:

> The first thing to say is that the reform was prepared, I would not say in secret, but certainly . . . it was prepared in a very smooth, quiet way. . . . Now, I think in terms of the Commission, it played out in the process quite well in relation to the main actors involved. DG Environment had been doing communications on environmental integration and internalization of externalities and so on, I think the approach that was taken was very well in line with that, and I think there was a good working relationship with DG Environment and DG Trade. . . . Clearly, in relation to trade and cross compliance, there were many different DGs who saw different issues they were concerned about, reflected in the regulatory framework, but certainly there was not a big battle, it was a reform that had broad support, but I think this was also down to Fischler, who had a very strong role in the Commission. (EC 25)

Fischler had a reputation as reformer. He was an agricultural economist who had been a long-serving Austrian minister for agriculture and negotiated Austria's accession to the EU. He had extensive expertise on agricultural policy, and by his second term of office, he had considerable experience in negotiating CAP reforms (EC 25; Pirzio-Biroli 2008, 102). To avoid early opposition from the status quo coalition, Fischler prepared the 2003 *Mid-Term Review* in a close-knit team of six experts that included his head of cabinet, Pirzio-Biroli, a member of his cabinet, and three experts from DG Agri.

Fischler managed to gain a unanimous vote among the European Commissioners in favor of his proposal before the agriculture ministers from the member-states, who were predominantly opposed to the proposal and had time to regroup and prepare their counterarguments (Pirzio-Biroli 2008, 106). Before the vote of the Council, Fischler made a deal with British prime minister Tony Blair to convince Spain to withdraw from the blocking minority of reform-critical countries, which was led by French president Jacques Chirac, who had played a key role in watering down the Agenda 2000 CAP reform and had tried to prevent Fischler from being reelected for a second term as European Commissioner for Agriculture (Pirzio-Biroli 2008; Syrrakos 2008; Swinnen 2008b). Fischler used policy-entrepreneurial negotiation tactics and his own expertise to push his reform proposal through the Council against strong French opposition:

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> On the 26th of June 2003, during the last night of negotiations in Luxembourg, the commissioner refused any suggestion of a further postponement, because he feared the creation of a new blocking minority (for example, with Italy replacing Spain). . . . During the last night "finish," all experts were asked to leave the negotiating room, while ministers were asked to stay there without interruption, and it was made clear that no more written compromise papers would be tabled by the Greek presidency and Commission until an agreement was in sight. This allowed Fischler to submit his personal compromise proposals on all outstanding issues orally, such that they could not be leaked to capitals, and to ask for oral ministerial reactions on the spot: "yes or no, and if no, why not." (Pirzio-Biroli, 2008, 107)

This strategy was possible only because Fischler possessed the necessary expertise to defend the proposal himself. He gave himself a negotiating advantage by blocking off the agricultural minister's contact to the capitals, because their staff could have provided them with arguments and expert knowledge. He was also at an advantage because the agricultural ministers had not been in the loop during the drafting process of the CAP proposal, what would have allowed them the necessary time to prepare counterarguments and corresponding studies (Swinnen 2008a). A major factor for the successful adoption of the 2003 Fischler Reform was Fischler taking on the role of a policy entrepreneur with strong beliefs (in his case, he advocated that the CAP needed to be saved via greening reforms; Pirzio-Biroli 2008) and who used all available strategies to steer the political negotiations toward a desired policy outcome that is in line with deeper and policy design beliefs:

> Fischler has been portrayed by both supporters and detractors as admirably indefatigable, persuasive and possessing a mind that understood every technical detail while forgetting nothing, sheer lasting power (while in this case seemingly necessary) was certainly not sufficient to get the measure passed in the Council. (Syrrakos 2008, 123)

A key environmental lobbyist also confirmed Fischler's key role in integrating greening objectives into the institutional machinery:

> I think a lot had to do with Fischler himself. . . . I think he was just an influential person generally. . . . [Countries] may send politically expedient choices but not necessarily people with big personalities and big ideas and Fischler over the last twenty years has been one of those people, and we saw that too because he was responsible for the fisheries reform in 2002, and although that didn't have as much promise as we hoped at the time, it was still a pretty important greening process officially and Austria's not well known for its fishing fleet, so it's evidence again of somebody who just has passion and that's the people around as well in his cabinet. (ENGO 9)

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While the changing sociopolitical landscape opened a window of opportunity for Fischler to propose his ambitious *Mid-Term Review,* it was not the decisive motivating factor:

> Fischler was extremely involved, and he was a very active Commissioner. I remember in terms of the communication [i.e., the legislative proposal], well I mean he was right into it and he didn't delegate to this Cabinet. . . . He was certainly the guiding force in the reinforcement of agri-environment, on decoupling, and I think on cross-compliance, he was very active. . . . He was always somebody who was very involved in the detail, but I think this is part of his background, he was a specialist, he understood it all. And the second thing is he was not only a "technician," he had a very strong political sense. . . . It was very much his reform. It was "the Fischler Reform." I remember, the communication went through 20 drafts, and most of the drafts we discussed with him, so you see he made the investment. I think he had his ideas, and politicians are politicians. I think his reform was successful because the circumstances were favorable. (EC 25)

In conclusion, active involvement in the Fischler reforms at the European Commission was limited to Fischler and his small team of dedicated agricultural experts, who had engaged in factual learning about agriculture for decades before the late 1990s and early 2000s. Fischler and his team reflected on their experiences during the Agenda 2000 reforms and adapted their behavior by limiting information on the policy reform proposals to a very small circle of experts. While these experts engaged only in very incremental factual learning, with no detectable change in deeper, policy design, or policy detail beliefs, they used policy entrepreneurial strategies to achieve policy change via conventional bargaining strategies without teaching other actors, and thus allowing a learning process to take place among the member states or other actors in the European Commission.

Separating Learning from the Negotiation Position

It is important to differentiate between additional knowledge, experience, or changes in beliefs and changes in official negotiation positions—the former points toward learning and the latter toward other explanations for policy change. These two aspects can be easily confused when changes in negotiation positions or any involvement of coalitions in the policy process is regarded as learning. There is the risk that analyses fail to acknowledge that learning can occur even though there has not been a detectable change in negotiation positions, or that negotiation positions can change without any learning, but rather due to other explanations. An individual can reflect on new input, gain new knowledge and experience, and even change underlying beliefs. Whether this is transmitted to a change in the

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negotiation position (i.e., the position of the organization that the individual represents) depends on many political factors that are at least partly beyond the individual's control:

> It's very difficult for one person in a realm like mine [to change positions, but] you can feed back [to your home country] on these sorts of things and send back reports and point to people. . . . It could be someone from another member state doing the same thing, sending it back to their capital saying, "This is interesting. Does this mean that we might change our position on this?" You're likely to hit some sort of machine, which, if it doesn't agree with what you say, then your idea's not going to get very far. I think there are probably influential people who you can target and if you persuade them, you're more likely to be persuasive overall. (MS 9)

Learning on the individual level can occur without changes in the negotiation position, as this requires a multitude of beneficial circumstances including active policy entrepreneurs who successfully use windows of opportunity to convince others that changing a position to reflect previous learning is in the organization's interest (i.e., it is in line with its existing deep core and deeper beliefs), and that it is possible for the organization to adapt its official negotiation position without negative political consequences in the short term:

> But it was with regard to sustainability, because ministers tend to have a short-term view related to the likely duration of their office and therefore seek to minimize difficulties for their constituencies in order to enhance their staying power and hand over the hottest potatoes to their successors. (Pirzio-Biroli 2008, 102)

Defensive avoidance (Janis and Mann 1977) is the second factor (after political interests) that explains why individuals, and subsequently their organizations, frequently cannot change their negotiation position, although they may have learned. This occurred in the Fischler Reform with regard to the member states and agricultural industry. Defensive avoidance means ignoring evidence that is not in line with an individual's or organization's deeper beliefs. This was especially the case with representatives of the status quo interest group that represented the agricultural industries' interests and aimed to preserve the CAP in its traditional form, with as little conditionality of payments upon greening and bureaucracy as possible. In particular, the lobbyists of the agricultural interest groups and representatives of several member states emphasized the importance of the CAP as an instrument of income support to farmers, food security, and affordable food prices for consumers.

It is important to recognize that these individuals had to represent their employer's position, regardless of their personal point of view. Thus, it is not possible to determine whether their personal opinion and beliefs regarding

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greening changed, and therefore whether these individuals engaged in constructivist learning, as this may have been obscured by loyalty to their employer's interests that prevented changes in their negotiation position:

> Because people believe or do not care about the evidence depending on their mindset and you see it with . . . I mean the people whose job is based on not understanding the evidence will never understand it. You see it with the farm lobby and various decision-makers that are controlled by the farm lobby. There is no amount of scientific evidence that you could ever present; it will not make any difference. Because, you know, if you are paid by people whose interest it is to do "A," you can get all the published literature in the world showing that "A" is bad, they will just keep saying that "no, it's good." Or try to find their own evidence or twist the interpretation in order to say "but yes, that is only because you are looking at the bigger scheme." Yes, there are many ways to justify the unjustifiable. (ENGO 3)

Over the past thirty years, the farmers' associations strongly defended the status quo of production-based support in the CAP and displayed a "massive opposition to reform" (Pirzio-Biroli 2008, 102). They formed their own coalition (Nedergaard 2008), which was based on a "strong survival instinct of national ministers for agriculture and . . . scepticism in Mediterranean countries" (Pirzio-Biroli 2008, 102). Farmers' associations tried to keep their policy design and policy detail beliefs aligned with their deeper belief about the necessity to protect European agriculture from international competition and to focus primarily on food security and agriculture as an industry that was already facing tough conditions (ENGO 2; Industry 1; Industry 5) and too much regulation, so the additional so-called green tape of cross-compliance with environmental measures in the first pillar would cripple their competitiveness (MS 4).

However, a change can be identified in the rhetoric used by representatives of farm associations, such as Copa-Cogeca, the largest farming association that predominantly represents the interests of intensive farming and industrial production (ENGO 3; Industry 4; Industry 5). Given the overall consensus of policymakers that in order to save the CAP, it needed to be reformed to reflect a public goods model, and the status quo coalition needed to move and acknowledge the overall societal consensus. The head of the Agriculture Cabinet at the European Commission pointed out that a few years after the Fischler Reform, "the farm organisations in Europe today admit that the Fischler reforms saved the CAP for the time being, and recognise that if Fischler had given in to Chirac's request to postpone reforms until after the WTO round, this could have meant the end of the CAP as we know it" (Pirzio-Biroli 2008, 108). The agriculture industry also recognized

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that its influence diminished due to the counterbalance provided by the ENGOs:

> I think it's been a gradual process quite honestly. I mean [the environmental NGOs have] . . . been there for a quite a long time and . . . always been quite vocal, but obviously the environment issue generally has taken more precedence in all debates, has grown in that way, so I think the power of the environment is all there. Their influence has increased quite dramatically I would say. (Industry 5)

Thus, the overall political negotiation position of the farm lobby has changed to accommodate the perceived sociopolitical consensus for a public goods model of the CAP, but they maintained their original position within that new policy framework. They still tried to minimize the regulatory burden for farmers in the form of environmental measures (MS 3; Industry 4; Industry 5), but they recognized that they needed to change their rhetoric toward a green growth argument in order to remain relevant in the changed policymaking climate, which attached greater importance to public goods and greening (Industry 5). A key strategy was not trying to change member states' positions, but to reframe the language to allow sufficient flexibility for them to interpret the negotiation outcome in a way favorable to the agricultural industry:

> The best way of approaching . . . [member states] is actually to adopt the wording the opposition is using in a way that can be accommodated. I mean, a good example is on something like decoupled support payments, where we fundamentally would oppose the decoupled support payments, whereas a lot of the member states really like them, they want to keep them, and I think by process of negotiation, you arrive at the recognition that to some extent some flexibility is allowed, but within the language, you try to promote the positives around a decoupled support system as well and ultimately you accommodate both our interest and their interest. It's not quite negotiation because you know, actually trading concessions [with] each other, you just actually adapt to the language in a way that can accommodate different interests. (Industry 7)

Yet there was no evidence pointing toward a change in the agriculture industries' beliefs. In consequence, farmers' associations and member states in the status quo coalition adapted their political negotiation position to the overall framing of agriculture brought about by shifts in the sociopolitical landscape, but it was not possible to determine whether they engaged in constructivist learning, as they had to represent their employer's official position. It can be concluded, however, that none of the individual learning experiences was sufficiently strong to enable or even motivate individuals to diverge from their employer's position in the research interviews or to report on their

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attempt to change their employer's official position. Therefore, it remains difficult to pinpoint learning in the case of the status quo coalition. Changes to the organization's positions were predominantly rhetoric and could be classified as lip service (Koch and Lindenthal, 2011). An additional reason is that the individuals representing lobbying groups or member states lacked the political power within their own organizations to bring about a detectable change in the organizations' official negotiation position, even if they had engaged in constructivist learning.

Any changes that occurred in the rhetoric of farm organizations served to protect the unchanged deeper beliefs of maintaining the status quo and related political objectives. Their primary motivation was to remain "at the negotiation table" (Industry 5) and not drift into opposition. They aimed to avoid being marginalized, recognizing that "if you take a view where you don't care about it or you give the impression you don't care about the environment, then you're going to be out of the debate" (Industry 5). The agricultural industry maintained their deeper and policy design beliefs within the new framing of the CAP as a public goods model. Even the policy detail beliefs regarding technicalities such as instrument design did not change, as they were still trying to maintain the status quo as far as possible or even to reverse previous greening achievements (ENGO 3; ENGO 9; EP 3; EP 8).

Overall, however, there were indications that DG Agri and a high number of individuals within DG Agri in particular changed their perspective on greening based on an increased exposure to debates on greening measures:

> DG Agri, when I started, they were totally in favor of farm interests and not green at all; now it's a more mixed picture, and some see it as a way to protect their budget. Quite a lot of them are seeing it instrumentally. But some of them are also asking for more green arguments to support their positions. So yes, there is really a two-way trust relationship. It's about trust; this is where relationships are incredibly important, if you don't trust that person, you don't share that information. (ENGO 5)

Links between Learning on the Individual and Organizational Levels

The key forum for learning to be transmitted from the individual level to the organizational level are committee meetings and other opportunities for exchanging views, forming common positions, and attempting to convince the other side of one's proposal. In the Fischler CAP reforms, there are several areas where learning on the organizational level occurred. It included forming a common point of view among individuals working

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within one unit or directorate within DG Agri or between the Cabinet of the European Commissioner for Agriculture and Rural Development and the DG. It furthermore refers to potential changes in knowledge, experience, and beliefs resulting from the interaction between representatives of the European Commission and the Council, as well as nonnational stakeholder groups such as the ENGOs or lobbying organizations of the agricultural industry.

Factual (and especially experiential) learning can be transferred from the individual to the organization and result in changed goals when the previous goal is judged to be inadequate. Constructivist learning on the organizational level would be evidenced by changes in the negotiation position of a governmental or NGO as the result of a change in beliefs, particularly normative beliefs related to an overall policy objective or the design of a specific policy instrument. The prerequisite is that the organization reflected on new input; for example, "those colleagues [of the European Commission] who are working on relevant aspects prepare and sometimes participate in the Council working groups. . . . It results in a constant reflection process in which we reconsider whether the proposal is realistic" (EC 22).

Learning on the Organizational Level

A key aspect of learning on the organizational level is whether policymakers in the European Commission reflected on the information that a sociopolitical consensus has been formed in favor of CAP reform toward a public-goods model, given that integrating environmental considerations was "an insight that occurred and succeeded globally, whether you take the Agenda 2000 or the Rio Process. This is a global reflection process that of course developed here as well" (EC 21).

A number of external factors in the sociopolitical landscape prompted key actors at the Cabinet Agriculture and Rural Development of the European Commission, including Fischler and his team, to reflect on the best course of action in response to the external pressures and the implications should the EU fail to reform the CAP. They were very sensitive to the importance public opinion and multiple pressures:

> It is several factors. . . . There were many activities of environmental interest groups around the Rio and Kyoto [climate change summits]. . . . These environmental groups increased their pressure. . . . I came to realize that you can't make policies against public opinion, not too long. I mean, you don't need to make policy according to the public opinion, but you can't go against existing trends that are getting stronger for too long. You have to justify yourself. (EC 22)

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This threat of overwhelming political pressure based on the potential ability of the Scrap the CAP coalitions to convince the public of the CAP's unacceptability resulted in a change of policy detail beliefs among key decision-makers in the European Commission and some EU member states. They realized that it would be necessary to reform the CAP before the political pressure to abandon it became too strong (EC 24).

Policy design beliefs point toward the overall architecture of a wider policy program and are represented by opinions of how a policy program should look like. In the example of agricultural policy, this would be the CAP overall as a common policy among all the EU member states. Policy detail beliefs concern the question of whether the CAP should have a multiannual budget and the policy direction of continuous reforms over the past decades to adapt the policy to changing demands in the economic, social, and environmental framework conditions. Further policy detail beliefs concern major structural decisions, such as the impact model of price support and maintaining high levels of food production as opposed to a public goods model that emphasizes public value for subsidies such as the protection of the environment and social cohesion by supporting rural development. In the CAP, such policy detail beliefs are represented by the introduction of the second pillar to rural development and the overall shift toward a public goods model.

Policymakers at the European Commission acknowledged the outside pressures by the coalition in favor of scrapping the CAP (Nedergaard 2008; Pirzio-Biroli 2008). They reflected on this information—that is, that continuing with business as usual was not an option, and that in order to maintain their objectives of an agricultural policy that is carried by all the member states and based on public support for farmers, they would need to adjust the policy to reflect the changed policy design beliefs of society. This can be regarded as factual learning by the involved policymakers, especially in the European Commission on the organizational level but also in some member states. During the 1990s, these policymakers came to adjust their policy design beliefs to reflect the changes in the sociopolitical landscape: the CAP needed to change to reflect the changing realities of environmental degradation and food safety, or it would lose its public support (Moehler 2008; Swinnen 2008b):

> At the DG for Agriculture, several of us concluded that if we wanted to preserve the CAP, we needed to change it; if we wanted to succeed in changing it substantially, we needed to just about guarantee the historical support levels to European farmers and avoid a negative impact on their revenues. Yet, a reform package leaving the CAP budget unaffected (except for enlargement) had no chance of acceptance in the College of Commissioners unless we adopted a new approach, and took it by surprise. (Pirzio-Biroli 2008, 103)

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This group of like-minded policymakers is the "moderate reform camp," which formed its own coalition besides the "status quo camp" of the farm associations and most member states such as France, Spain, Germany, and Italy; and the Scrap the CAP coalition of market liberals in the EU member states and environmental groups (Nedergaard 2008). Most policymakers changed their policy design belief that the CAP needed to adapt in order to be preserved in the 1990s. Since then, this has become a stable, shared underlying belief among the members of the moderate CAP reform coalition. This shared belief was emphasized by all the interviewees at the European Commission, who were involved with CAP reform as the key motivation for the continuing reform process (e.g., EC 21; EC 22; EC 23; EC 24; EC 25; EC 14; EC 19; EC 20; Moehler 2008; Pirzio-Biroli 2008; Syrrakos 2008).

The European Commission was not a neutral actor; rather, it actively tried to transform its policy design belief of adapting the CAP to sociopolitical realities in order to save it into a specific policy outcome. This is reflected in the policy proposals for CAP reform and the Commission's strategies during the negotiations in the Council. Although the Commission is formally reduced to a facilitating and observing role (Craig 2010). The process of drafting a policy proposal, negotiating a compromise within the European Commission between the various directorate generals, and convincing the Council to adopt it with as few changes as possible remained unchanged. Some actors among the status quo coalition consisting of farmers' associations and several EU member-states (Nedergaard 2008) adjusted their rhetoric to reflect the sociopolitical consensus of the 1990s–2000s in favor of the public goods model. This move, however, could be regarded as a tactical move to ensure their political survival and protect them from having to change their deeper or policy design beliefs.

There was less constructivist learning among the status quo coalition in terms of changes in underlying beliefs than could be expected at first glance. The coalition of the Scrap the CAP camp, rather, served as a source of external pressure on the policymakers within the European institutions, who predominantly belonged to the Save the CAP coalition but drew their motivation and argumentation from the more radical demands. Thereby, they actively influenced public opinion as a tactical move to gain political support and momentum. This was the case for the Fischler reforms in 2002, as indicated by Fischler's head of cabinet, Pirzio-Biroli, and confirmed by a member of the small team that prepared the proposal:

> CAP opponents seemed at times ready to scrap the CAP, which means throwing out the baby with the bath water. Scrapping the CAP is not an option. European treasuries that may still dream of it should think twice before opting for short-term gimmicks. Their simplistic and narrow budgetary view was fought by Fischler's

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> more systemic approach seeking internal compromises among, and corresponding mentality changes by, the various stakeholders. Fischler sought to find new allies in support of both the conservation and renewal of the countryside. . . . [Fischler's] compromise approach was expected to make the policy more acceptable internally as well as internationally, in particular to farmers (through simplification and by reestablishing a certain confidence in their future), rural people and society at large. Nevertheless, Fischler advocated a tectonic shift in CAP support over time. (Pirzio-Biroli 2008, 104)

The Impact of Learning on the Policy Outcome

In particular, the European Commissioner for Agriculture and Rural Development acted as a policy entrepreneur (Mintrom 2013) and actively gathered public support, tried to convince political decision-makers, and very strategically orchestrated the political negotiation and bargaining process to push his policy proposals through the Council. Constructivist learning on the organizational level occurred within the European Commission by forming the policy detail belief that the CAP must adapt to sociopolitical changes to safeguard its continued political support, and thereby its existence.

Interview data suggests that the policymaking machinery perpetuated and reenforced changes that may have been a result of learning. In the case of Fischler, there is little doubt that his deeper beliefs, which also included rural development and environmental protection, were formed at some point in time before his active involvement as the Commissioner for Agriculture and Rural Development. While in this role, he followed his "green" beliefs and used the window of opportunity that was also referred to as "the perfect storm" (Swinnen 2008a) to realize the greening aspects in the 2003 *Mid-Term Review*. At this moment, the CAP achieved a new level of path dependency, which set strengthening the greening aspects of the CAP on any future reform agenda. This explanation is capable of accounting for the references of individuals involved in CAP reform who stress that it was an institutional machinery following a self-perpetuating process (EC 20; EC 21; EC 24). A very relevant aspect is that the European Commission was able to take a longer-term view that goes beyond the time span of headlines in the press and the next election, which enables these policymakers "to do the right thing" (EC 24). Due to this longer time horizon, it was easier to reflect on policy proposals, take scientific inputs into account, and translate the overall public consensus in favor of greening and climate action into a policy proposal.

There was also a certain degree of experiential learning that penetrated the institutional machinery of DG Agri. While deeper green beliefs already existed among key individual actors and did not change or demonstrably

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diffuse to other actors during the policymaking process, they were instrumentalized on the organizational level to protect the deeper belief of DG for Agriculture (and the wider moderate reform camp) that the CAP must be maintained, which was also shared by the individuals acting on its behalf. This reflection on societal value change in the form of the public money for public goods debate resulted in the key conclusion that greening the CAP is an appropriate step to maintain sufficient public and political support.

This instrumentalization of greening protected the overall status quo of the CAP as Europe's largest public finance instrument and allowed for continuing on an incremental reform track in line with overall changes in the sociopolitical landscape. The policy entrepreneurs consequently did not convince the rest of their governmental organization of the importance of greening in its own right, but only of its relevance for achieving the already existing organizational objective of maintaining the CAP while allowing incremental changes to its policy design and policy details.

There was a link between the individual level of the policymaker, which already holds beliefs in line with the policy outcome of greening the CAP, and the organizational level, which accepts an instrumentalization of greening in order to continue to achieve its organizational objective (i.e., belief) of maintaining the CAP within a reform process. In consequence, the deeper beliefs of neither the policy entrepreneur on the individual level nor DG Agri/the European Commission nor the member states on the organizational level changed. The policy design beliefs brought about the idea that agriculture needs to contribute to the public good of environmental protection, which mirrored long-term changes in the sociopolitical landscape.

Overall Learning in the Early Common Agricultural Policy Reforms

Individuals who act as policy entrepreneurs based on their underlying beliefs are crucial agents of change to arrive at a policy outcome. Changes predominantly occurred in the form of policymakers recognizing shifting preferences in the sociopolitical landscape and within individuals in the form of increasing knowledge and gaining work experience with CAP reform. The greening aspects of the CAP are built on developments dating to the 1980s via greening the CAP through the MacSharry (1992) and Fischler (2000–2003) reforms to increase the legitimacy of the subsidies paid to farmers (Feindt 2010). It was reframed as public money for public goods narrative, of which environmental protection is a key element. Table 5.1 summarizes the findings on learning in the 1985–2003 CAP reforms.

Which type of learning on the individual and organizational levels occurred depended on several factors. The key issues were the interplay of

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Table 5.1
Learning in the 1985–2003 CAP

	Factual Learning	Experiential Learning	Constructivist Learning	
Individual level	Yes, but limited: Incremental as experts at Cabinet/DG Agri reflect on new scientific input	Yes: Reflection on experiences with Agenda 2000 and subsequent change in negotiation tactics by Fischler and his team for 2003 *Mid-Term Review*	Deeper beliefs	No change: Actors at the European Commission, agricultural industry, and EU member states maintain the deeper belief that the CAP must be maintained, existing green beliefs among several individuals in EC and ENGOs
			Policy design beliefs	Yes: Change in 1990s within moderate reform coalition; acceptance that environmental protection matters to public; the CAP needs to adapt to maintain public acceptability
			Policy detail beliefs	Yes: Change in line with policy design beliefs (e.g., support for decoupling and conditionality of payments)
Organizational level	Yes: Reflection on emerging scientific consensus on negative environmental impacts of the CAP	Yes: Iterative process (policy reform)	Deeper beliefs	No change: Remained stable for member states, agricultural industry, EC, ENGO
			Policy design beliefs	Yes: In 1990s within moderate reform coalition; acceptance that environmental protection matters to public; the CAP needs to adapt to maintain public acceptability
			Policy detail beliefs	Yes: Change in line with policy design beliefs; support in the Commission for greening measures

long-term learning in the form of shifting beliefs among the wider society that set the political framework parameters. It also depended on whether individuals found the time to reflect on new input and were subsequently able to convince their organization of its importance and the resulting necessity to change the organization's negotiation position. The key drivers for a successful policy outcome were policy entrepreneurs in key positions who had the opportunity, knowledge, personal drive, and conviction to steer the political process into their desired direction using predominantly conventional negotiation tactics to dominate the other coalitions. Experts involved in developing a policy proposal did reflect on information presented to them by external experts and stakeholders, but they were already familiar with the information in many cases.

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6 Learning in European Agriculture Policy, 2003–2018

Following the close examination of learning between 1985 and 2003 with a focus on the 2002–2003 Fischler reforms/*Mid-Term Review* from chapter 5, this chapter continues with a longer-term analysis of learning in greening the CAP between 2003 and 2018. The focus is on the second major greening reform pursued by Cabinet/DG Agri for the 2014–2020 Multiannual Financial Framework (MFF) of the EU adopted by the European Parliament and the Council of the EU in June 2013. The chapter first analyzes key developments in further greening the CAP before discussing when, why, and under what conditions learning occurred and the extent to which it influenced the policy outcome. It finds that learning occurred in several but not all aspects, a group of policy entrepreneurs played a key role in pushing for a policy outcome, and this policy outcome was less the result of learning on the organizational level than the result of how the institutional machinery of the EU works.

Greening the Common Agricultural Policy, 2003–2018

2008 "Health Check"

The 2008 mini-reform termed Health Check first introduced the objective of addressing climate change into the CAP (European Council 2009). This marked the first instance of specific CPI. It coincided with the 20-20-20 Strategy set out in the Climate and Energy Package to reduce greenhouse gas emissions by 20 percent (compared to 1990 by 2020), increase renewable energies to 20 percent of the total, and increase energy efficiency by 20 percent (EC 27; EC 2008a; European Council 2007), and paved the way for reframing EPI into CPI. Besides phasing out milk quotas, assisting some sectors with special problems, and improving intervention mechanisms, the Health Check 2008 further strengthened cross-compliance and

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reduced red tape (i.e., bureaucracy) by simplifying the rules (European Council 2009). Overall, the Health Check recognized climate change as a challenge but did not address the issue via increased carbon sinks. It even took a step backward by abolishing the requirement that farmers set aside 10 percent of their arable land for ecological focus areas (European Council 2009).

Common Agricultural Policy 2014–2020

Greening the CAP (EC 2011b; 2011c) was one of the flagship initiatives of the climate mainstreaming approach (EC 2013) proposed by the European Commission in 2011 for the 2014–2020 MFF of the EU (EC 2011a). This CPI was applied to policies that do not automatically contribute to climate mitigation but require intervention through legislation, conditionality, and financial instruments (Rietig 2013). The major change for the first pillar was to dedicate 30 percent of direct payments to agricultural practices that are beneficial for the climate and the environment. The expected benefits for climate mitigation included enhanced carbon content of the soil (EC 20; EC 24). The second pillar facilitates rural development through the European Agricultural Fund for Rural Development (EAFRD). A key objective of the second pillar on rural development was climate action through the sustainable management of natural resources, primarily by facilitating the shift toward a low-carbon and climate-resilient economy in agriculture (EC 2011c; European Council 2013). Thus, 25 percent of the total contribution from EAFRD was to be devoted to the rural development programs on climate mitigation, adaptation, and land management (European Council 2013).

These steps in themselves could be regarded both as CPI and EPI according to criteria set forth in the literature (Lafferty and Hovden 2003; Jordan and Lenschow 2010; Rietig 2013). They contribute to reducing emissions by increasing carbon sinks (e.g., through set-aside of land), adapting to negative climate impacts, and reducing the negative environmental impacts of agriculture. The actual CPI and environmental mitigation ambitions of the Commission's proposal (EC 2011b; EC 2011c) and the policy outcome (European Council 2013) were criticized by ENGOs as too small, focusing only on small political compromises:

> Everybody agrees with greening because they need to justify the money that is behind it, but the problem is that, if you really go to, OK, and now we are talking serious, not big politics anymore, it's very difficult for them to really make it change. . . . The environment is very attractive to put a big green label on. (ENGO 2)

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The three interest groups introduced in the previous chapter still existed in the 2014–2020 CAP negotiations. The ENGOs and Green Party representatives in the European Parliament called for ambitious reform, or otherwise radically reducing payments to farmers who are not serving the public good of environmental protection. The European Commission favored moderate reforms to maintain the CAP, and the agricultural industry worked to preserve the status quo. Most member states remained in support of the agricultural industry, including Germany:

> What was quite obvious is that the influence of the agricultural lobby, the German and the European, decreased recently, at least on the Commission and the proposals that came from the Commission. The influence of the agricultural lobby on Germany is still immensely high, but Germany is only one player. The German minister for agriculture, Mrs [Ilse] Aigner, essentially represents the position of the agricultural lobby in Brussels. (MS 4)

The European Commission focused on its justification of the greening aspects, which can be seen as a continuation of the MacSharry 1992, Agenda 2000 and *Mid-Term Review* 2003 Fischler reforms, and on the need to listen to public opinion and the increasing criticism of the CAP. The CAP, however, is a fairly complex policy not featuring high in public opinion and drawing limited attention from the media (ENGO 3). This de facto limits the discussion to smaller circles—that is, "clearly when the politicians feel the heat from public opinion, then they take action. The big problem . . . [is that] the CAP is constructed in such an obscure and complex way . . . that there is very little public debate about it" (ENGO 3). As a result, "most citizens don't have a clue, sorry, what is going on in Brussels and what agricultural policy is; there is only a very small percentage in the population [who knows and cares]" (MS 4).

Nevertheless, the food scares of the 1990s, such as bovine spongiform encephalopathy (BSE), resulted in an increasing interest of ENGOs, consumers, and the wider society in European agriculture. This group represents "the other 99 percent" (EC 21) of stakeholders, as agriculture has a profound impact on human health via food safety and environmental conditions. The policy outcome was a continuous adjustment of the CAP and a gradual shift toward the public goods model over a period of thirty years. This was both driven and supported by the changing public opinion on the CAP, the perception of which prompted policymakers to agree to adjustments in order to preserve the CAP overall in the period of 1985–2003. In particular, ENGOs were interpreted by key policymakers in the European Commission and the European Parliament as representatives of public opinion that could not be ignored in policymaking:

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> So I think you have this shift in public opinion, the shift in the positions of NGOs and as well the role of the academic debate, you see concepts coming into play in a way which I think is much more talking to the agricultural debate on greening. (EC 25)

Learning on the Individual Level

Learning on the individual level depends strongly on the preexisting knowledge of the involved individuals. The learning curve is very steep if the individual had only limited involvement with the policy field and takes in much new information within a short period of time (see chapter 2).

Members of the European Parliament

The codecision procedure for the CAP introduced by the Treaty of Lisbon (Craig 2010; Roederer-Rynning and Schimmelfenning 2012) broadens the factual and experiential learning to the MEPs. These were confronted with new information and more closely deliberated the 2014–2020 CAP reform than they did when the EU member state's ministers in the Agriculture Council previously decided on the CAP. Therefore, there was a considerable amount of factual and experiential learning among MEPs (EP 1; EP 2; EP 3; EP 5; EP 6; EP 7; EP 8). At the same time, the learning of individual MEPs also depended on their previous expertise in agricultural policy, which was heterogeneous throughout the Agricultural Committee in the European Parliament:

> Some of the MEPs in [the Agricultural Committee in the European Parliament], they have a wealth of experience and expertise and other people—agriculture might only be their second or third committee and it's very much of minority interest, and you can tell from the sort of fairly superficial level of their questions and interventions that [their expertise is on a] rudimentary level, so we have a very great range [of expertise]. (EP 10)

MEPs are presented with a large number of studies, position papers, and requests to take the positions of interest groups into account. MEPs across different parties and from different member states pointed out that they listened to the input provided by the different interest groups, and then reflected on what input best mirrored their political objectives and their electorate's preferences (EP 1; EP 2; EP 4; EP 5). Thus, they filtered information based on its perceived usefulness with preexisting political objectives (EP 2; EP 3).

Experiential learning was stronger in the European Parliament than factual learning. The key reasons for this were constraints on the time and resources needed to closely engage with the studies and reports due to very

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full working schedules and individual MEPs' involvements with many issue areas (EP 6; EP 7; EP 8). They reported that they lacked the time to reflect sufficiently on detailed factual knowledge, and thus tended to prefer personal conversations with experts and representatives of interest groups to ask them about the key facts they needed to know:

> I have to be clear on that; a politician is only as good as his team. I am absolutely convinced of that. When I have 10, 14 appointments per day, . . . then I can't sit in the office and read [scientific studies] for hours. I simply can't. Okay, I can read a few things during meetings . . . , but I am also limited and need my six hours of sleep. . . . I have to rely on my assistants to analyze the flood of knowledge, but even that is not possible. I prefer to talk to scientists rather than reading their studies. (EP 2)

Engaging with stakeholders, lobbyists, and experts was a key method for MEPs to determine their preferences, gain factual knowledge, and form their own position:

> They form their position [by] listening what other people think, and I mean . . . , they need to listen what their party says, they need to listen to what the national people say, so they have to follow the government, if they are in government or they have to follow the position. (ENGO 2)

The previous expertise and the quality of the advisors played a key role, given that MEPs relied on their previous knowledge and the policy briefs that they received from their advisors (EP 1; EP 2; EP 5; EP 10). The advisors, however, were frequently in a weak position to provide substantial technical advice, as they were predominantly preoccupied with administrative and organizational issues:

> It's difficult for them. It's very difficult. [Advisors] only [gain expertise] if they really have a file that's their job to work on. Of course, you have certain people, certain of the chairs they have, advisers that work specifically on certain things [than] they have more capacity. But your average MEP assistant will have difficulties to follow things in depth, which is understandable, I mean I wouldn't want to go to their inbox everyday, they probably get like 200 or 300 emails that they have to deal with and they organize events. . . . A lot of them have to deal with all the logistics. . . . [They don't have a] specific secretary for that. (ENGO 2)

While advisors to MEPs frequently struggled to engage deeply in issues, given their administrative duties, the advisors of the parliamentary groups had more scope to gain expertise and participate in the debate as knowledgeable advisors:

> I think it would be a fair generalization to say the MEPs assistants, they tend to be the youngest and the generalists. Then there is quite a large degree of influence and

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> within the political groups resting on the shoulders of the political group advisers and they do have that background and specialization and they are able to help the thinking and evolution of the policy positions amongst the political groups. (EP 10)

This time pressure hindered the development of in-depth expert knowledge during the CAP negotiations; however, experiential learning did occur because the meetings with stakeholders, interest groups, and discussions among MEPs in their political groups took up considerable time, and MEPs learned by being involved in the policymaking process. The setup of the European Parliament thus encouraged MEPs to specialize in an area where they can draw on previous expertise based on their education or professional work experience (EP 2; EP 3; EP 4; EP 5). The level of previous expertise also influenced how easily an MEP changed their policy design beliefs based on factual input. If an MEP knew little about the details of a policy proposal such as the CAP reform, they could be convinced by lobbyists more easily, as this environmental lobbyist points out:

> Most of the time, you just convince people who don't know about an issue fully, which is part of the thing and then they will go check it, of course, and maybe they don't agree. (ENGO 2)

It is also important to acknowledge that only a few individuals, such as the rapporteur and the shadow rapporteur, were closely involved in the decision-making, drafting of legislation, and chairing of the committee meetings and negotiations with the European Commission and the Council. These individuals were already experts in the policy area as expertise, and personal affinity is a key self-selection criterion for engaging in certain committees and volunteering/being proposed to serve as a rapporteur (EP 4; EP 5; EP 10). A longtime observer of the CAP reform policy process concluded that

> the standard of the debate in the Parliament is very poor. . . . They [the MEPs] are not really engaged, it's more like grand gestures, just irritating, somewhat they are discussing is more like a 1990s version of farmers' interests. . . . The lack of knowledge is a huge problem in the Parliament. They don't understand the policy; it's interests and politics. And we write reports to the Secretariat . . . and when you go to a public hearing, there a few of them, not a lot, including the chairman, that are very informed, but a lot of them just listen to their lobbyists. At the end of the day, its boring studying policies, there are thousands of studies, tedious regulations and details; it's hard work frankly. So they are not really motivated, you know, and because they never really had to do it in the past. So they are not really on top of it. (ENGO 5)

Therefore, experiential and factual learning did occur among MEPs, but it was also to be expected as a normal part of the codecision policymaking

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process. Empirical findings strongly point to the key role of individuals in powerful coordination positions, such as the rapporteurs, who due to their high expertise had a less steep learning curve. As the European Parliament was involved in the codecision process for the CAP for the first time (Roederer-Rynning and Schimmelfenning 2012), it is to be expected that an increasing number of MEPs that were reelected to the European Parliament in the 2019 elections engaged in more factual learning and experiential learning as the negotiations for the 2021–2027 CAP reform and MFF went under way.

The limited capacity for factual learning on the individual level due to lack of resources and overwhelming time pressure also became a relevant hindering factor for the European Parliament's overall effective participation in the trilogue, as a member of the European Commission concluded after the negotiations:

> It was a problem of the proposals from the very beginning that they tackled too many things at once. . . . Especially the Parliament was kind of overwhelmed. They did not have enough staff. They always felt unfairly treated when the Commission appeared with twenty people and the Council appeared with twenty people and they were sitting there with one rapporteur with one or two assistants and five shadows . . . so they were complaining about this lack of in-depth knowledge and discussions about these things. (EC 19)

The deeper beliefs of individuals also matter, particularly as a baseline to determine whether constructivist learning occurred. These deeper beliefs were frequently formed early, but they do not necessarily determine the professional pathway into a green political party or environmental ministry. Individuals can hold deeper beliefs in favor of environmental protection and climate action while working in environmentally unrelated areas, such as this MEP in the agriculture committee of the European Parliament, who was not a member of a green party:

> I have always been someone who is particularly mindful of the environment. I come from the antinuclear movement . . . and was leading every demonstration. . . . No, I did not change in this regard; I was already actively supporting the environmental cause as a young person. (EP 2)

Learning among Key Actors in the European Commission

For policy proposals to succeed through the various stages of the hierarchy, individual policymakers needed to convince their colleagues at the European Commission of the proposals' economic soundness and political feasibility, and their personal reputation is also on the line:

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> If it is scientifically sound, also in terms of experience, [individuals can push policy proposals to the higher levels of the European Commission hierarchy]. But if you realize a proposal is not received well, in terms of expertise or politically, then you won't let the colleague make the proposal alone or you motivate the colleague that he checks with the other [units or DGs]. . . . This is a learning process. If your proposal is received well, then you know you have the right message. . . . There are constant checks and balances. (EC 22)

They emphasize their constant reflection on their own working experience and the input they received from experts both inside and outside the Commission:

> I critically examine new input; I try to include the new input from my daily work into discussions, as well as to test ideas and their validity. In these discussions, many new thoughts and aspects emerge. This is essentially a combination of new insights, new links, especially in empirical work, plus a consolidation and reconstruction of experience and expertise. This needs to be redeveloped within new framework conditions of fact-based parameters. (EC 21)

This individual reflection process also widened toward reflection and knowledge gains on the intraorganizational level within the European Commission:

> [Permanent reflection] is of course something that is not communicated to the outside. . . . [The Directorate General for Agriculture and Rural Development] had a very intensive phase throughout the first six months. I can show you how many hundred thousands of pages have been exchanged [between the Commission and the Council presidency]. (EC 22)

Reflection on the input primarily resulted in changed policy detail beliefs, while deeper beliefs and policy design beliefs were more difficult to change. Interviewees emphasized that it was important to continuously repeat the key message and to keep presenting evidence in order to convince individuals that were members of an opposing coalition (e.g., EC 15; EC 22; EC 23; EC 24; ENGO 3; EP 1; EP 2; EP 5; Industry 1; Industry 4; Industry 5). Several individuals changed their policy design beliefs (i.e., about the overall direction and continued existence of the CAP) when dialogues with stakeholders widened their perspective to take into account aspects that were previously not part of their thinking, and therefore decision-making (ENGO 3; EP 5). ENGOs especially addressed this more emotional level when they facilitated policymakers' experiential learning by trying to make policymakers better understand the potential and real impacts:

> Part of it is emotional, moral issues. Picturing the things. One thing that makes a lot of difference with officials is if they see things, if you are able to take them to a countryside, or if you are able to talk to them about a place they know in their

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> home country and you say, "Think about that region, and that other region, this is because this has happened here and that has happened there." Then sometimes it clicks and you get through. So there is a more rational knowledge part, and there is a more if you want emotional identification thing because as long as something is a statistic it does not really talk to you, but if you in your summer house you spend the summer holidays and you know there is "Ah yes, there is always this beautiful grassland with lots of flowers, but now they have plowed it up and the flowers are gone." It often helps people to actually open up to the facts because the facts on their own don't really turn around people. (ENGO 3)

Factual and experiential learning also occurred when policymakers were exposed to potential unintended consequences. Dialogues with stakeholders such as ENGOs and consumer groups equipped them with new perspectives that were outside their usual sources. This exposure to new aspects of policy that had not been a considerable factor in previous decision-making to date triggered learning via shifting policy design beliefs when individuals not only reflected on the input, but as a consequence also changed these beliefs and adapted them to the new frame. In particular, repeating the same message proved successful (EC 22; EC 24; EC 25; ENGO 5) at getting individual policymakers to change their fundamental position on the policy in the long term and to take into account environmental considerations:

> You keep talking to people and slowly, slowly it sinks. Some people turn around and we have seen some officials in DG Agri that over the years have come from not even knowing what the environment is to at least understanding that they have a role to play and caring about it, trying to make a difference. With other people, you never get through. (ENGO 3)

In the CAP negotiations, individuals working for the Commission also engaged in experiential learning when they reflected on their experiences throughout the policymaking process and arrived at conclusions that are relevant for the next negotiation round:

> I would say we need to much more look into simplifying the complex scientific basics because just stating something like "Permanent grassland is good" . . . [was] taken apart by lobbyists and the people briefed, they couldn't counter specific arguments because they didn't have the background knowledge so the information then needs to be much more relayed, transferred, explained. The Parliament [was] . . . lacking a lot of technical explanations, so that's where we tried to come in. (EC 19)

In consequence, how much individuals learned in the policymaking process depended on their existing knowledge, experience, and beliefs. Overall, the learning curve of individuals at the European Commission was less

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steep than the learning curve of the MEPs who were first involved in the CAP reform, except those individuals who were new to CAP negotiations. By continuously being involved in the CAP reform process over decades, and by beginning to prepare the next CAP reform once the previous one had been decided, the civil servants at DG Agri accumulated more experience in reforming the CAP, but they added only marginally to their already vast experience, and especially expertise. In particular, CAP reform toward a public goods model remains the domain of a handful of experts inside the European Commission's DG Agri. By integrating climate considerations, the circle of experts widened; however, the key individuals in other directorate generals involved with CAP aspects moved from key positions within DG Agri to their current posts (e.g., EC 20; EC 22; EC 25). The European commissioner, Dacian Ciolos, held strong deeper and policy design beliefs before his specific involvement began (EC 2010):

> That is clearly his personal conviction that this is necessary and needed for the European farm industry. It is his absolutely deep conviction. Yes, I think he probably always had this kind of conviction. It's just the reality. He is a great expert in agriculture, he is an agronomist, so he knows about agriculture as a professional, and I think he also sees the reality out there that some elements of our policy have led to situations, which are hardly explainable. And we spent a lot of money for problems that we are having, so we need the instrument of the CAP, which is a very powerful instrument because of the money, to change direction. (EC 24)

Thus, few actors changed or formed their underlying beliefs during the drafting and negotiations of the proposal; rather, they acted in line with their preexisting beliefs as policy entrepreneurs in order to align the policy outcome with their own underlying beliefs.

Learning among Representatives of Member States

The civil servants and politicians negotiating on behalf of their member states via the Council working groups could be seen as similar experts to those in the European Commission, with the limitation of national capacities and career structures. Some countries have a generalist civil service structure that encourages frequent rotations between policy fields and making the development of a specialist culture difficult. The majority of the interviewed negotiators, however, had a similar track record of involvement with agriculture policy as the civil servants at the European Commission. The key difference was the member state representatives' specific expertise on the particularities of their home countries' agricultural sectors and their

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understanding of the likely positive or negative economic impacts of the European Commission's proposals. Their knowledge on other countries' agricultural sectors tended to be limited. Much learning among member state representatives in the Council was factual learning regarding the agricultural sectors in other countries:

> So I think some of the arguments from those member states did influence our opinion because you get to learn a bit more about exactly how different types of agriculture work in other member states and therefore can see how some of the provisions might impact them in a way we wouldn't have instinctively known about because we don't really understand how agriculture in those member states works. So it certainly was a bit of learning to that extent. (MS 10)

As with industry lobbyists, the representatives of member states had to continue to represent their countries' positions in the negotiation regardless of whether their personal underlying beliefs were aligned with their countries' position. Thus, it is not possible to determine whether the individual beliefs of any of the negotiators changed.

Learning on the Organizational Level

Individuals did learn while being involved in reforming the CAP, whereby their learning was predominantly experiential and factual. Beliefs changed over longer time periods, together with the shifts in the sociopolitical landscape, but these belief changes toward greening can also be understood as strategic response to maintain the CAP. In this section, I examine the organizational level, which is crucial for learning to be reflected in the policy outcome, and the links between learning on the individual and organizational levels.

Links between Learning on the Individual and Organizational Levels

As outlined in chapter 2, the key forum for learning to be transmitted from the individual level to the organizational level are committee meetings and other opportunities for exchanging views, forming common positions, and attempting to convince the other side of a proposal. In the CAP reforms, there are several areas where learning on the organizational level occurred, including forming a common point of view among individuals working within one unit or directorate within DG Agri or between the Cabinet of the European Commissioner for Agriculture and Rural Development and his directorate general, as well as between different directorate generals of the European Commission. It furthermore refers to changes in knowledge, experience,

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and beliefs resulting from the interaction between representatives of the European Commission and the European Parliament and Council, as well as nonnational stakeholder groups such as ENGOs and agricultural lobbying organizations. The organizational learning literature focuses on factual and especially experiential learning that can be transferred from the individual to the organization (e.g., Kim 1993; March and Olsen 1975), and even result in changed goals when the previous goal is judged to be inadequate upon reflection, which is referred to as double-loop learning (Argyris 1976; Argyris and Schön 1978).

The third aspect presented in the section on learning levels in chapter 2 was constructivist learning on the organizational level, which would be evidenced by changes in the negotiation position of a governmental organization or NGO as the result of a change in beliefs, particularly normative beliefs related to an overall policy objective or the design of a specific policy instrument. The prerequisite is that the organization reflected on new input (e.g., in the form of scientific studies), such as the European Commission in standardized reflection processes:

> Those colleagues [of the European Commission] who are working on relevant aspects prepare and sometimes participate in the Council working groups. This is supported so that the Commission receives feedback [from the member states]. In the current phase this does not result in changes to the proposal, but it results in a constant reflection process in which we reconsider whether the proposal is realistic, whether we have to talk to our hierarchy to adapt it and so on. This is a permanent reflection process, permanently. This is of course something that doesn't leak to the outside. But we had a very intensive reflection phase during the first six months. I can show you how many hundred thousand pages were exchanged. (EC 22)

The European Commission, and particularly the EU member states, came to the conclusion during various CAP reform negotiation processes that it was in their interest to adapt their position in the light of new evidence:

> We observed regularly that those positions originally taken by the member states resulted in legal problems and explained to them why and how their position results in legal and administrative obstacles. This usually resulted in a change in the member states' negotiation position. Furthermore, when the Commission pointed towards practical difficulties in implementing the amendment, those who proposed it usually withdrew it subsequently. (EC 23)

Such changes in negotiation positions among the member states in the Council were frequently a result of factual learning as opposed to constructivist learning when they gained new information and concluded that their core interests were better served by changing the negotiation position.

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Learning in the trilogues among the European Parliament, the Council, and the Commission remained predominantly factual and experiential. Constructivist learning, evidenced by changes in negotiation positions based on reflection on arguments and key actors' accounts of changed beliefs due to convincing arguments, could not be detected on the organizational level. In particular, a change in the negotiation position could be evidence for factual, experiential, or constructivist learning on the organizational level, depending on the reasons for this change. If the organization reflected on other negotiation parties' arguments and came to change underlying beliefs, this shift in negotiation position could be regarded as constructivist learning. If, however, the change in the negotiation position were the result of reflection on new information and adjustment of the position still with the goal of achieving preset goals (i.e., correction of an error), it would be factual learning. If the shift were based on the reflection on previous experience (e.g., with a policy in a member state), it would be experiential learning on the organizational level. Negotiators involved in the CAP emphasized the importance of trust and knowing each other facilitating a reflection on the arguments of the negotiation counterparts from other member states:

> We get to know them very well. . . . It can either make you think, "Oh they've actually got a point. I understand why they want that." I'm more likely to agree with them now. Sometimes it can work the other way and you can understand why . . . it's really important to them and think "well okay, that's fine, but I'm going to want something," but actually that doesn't make any difference [to us] . . . whether they get it or not. But if we're to agree with them, I'm going to want something in return. I think it's always, talking to other member states and to colleagues, you can learn a lot, which will help in negotiations. Sometimes it can actually hinder them, but you have to be careful you don't say too much or make it seem . . . too important because sometimes I think it can potentially lead to other member states thinking, "Well if it's so important to them, I understand why, but I'm going to want something in return for agreeing to it." It can work both ways. Sometimes it helps a lot. Sometimes it leads to a bit of playing games. (MS 10)

This kind of learning can be understood as factual learning on the organizational level (i.e., among member states about one another's positions). The individual negotiators used this knowledge to determine other member-states' negotiation margins on issues that they might be able to agree on if the others made certain concessions. This strategizing, however, falls into the category of political learning described by Radaelli (2009) and May (1992) on how to use information and gain experience to better maneuver through the negotiation process in order to achieve preset objectives. The learning described by the member state negotiator interviewed in

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MS 10, however, was limited to gathering information about the other side's negotiation margin, and thus it falls into the category of factual learning.

It is important to analytically distinguish between an adjustment in the negotiation position based on the realization that the previous position was based on incomplete information, normal negotiation behavior, and a genuine change in beliefs, which goes beyond an interest-based rationalization via the incorporation of new values in the area of deeper beliefs. A key example would be the forming of a consensus within DG Agri that it is important to consider climate objectives in the future reform rounds of the CAP. In the negotiations between the European Commission and the European Parliament and Council, however, constructivist learning remained rare and changes in negotiation positions could be understood as bargaining in negotiations based on predetermined interests:

> Partly the Commission succeeds in convincing its negotiation partners why the Commission proposal makes sense. In other areas this was not successful. . . . [The reason is that] the member states or the Parliament simply did not understand the value added of the proposal, or if you want to interpret it this way, the Commission did not succeed in illustrating the value added. This is often the case in areas where there is existing legislation and it's more advantageous for member states to reject the Commission proposal and to maintain the status quo. (EC 23)

This was confirmed by a key member state negotiator:

> I think at the beginning of a negotiation like that on greening, everybody's got very strong principles and everybody thinks, "No, we need greening that is meaningful, that delivers real environmental benefit." To be honest, towards the end of the negotiations, then people [member states] accept things they just would not have done twelve months ago. In the end, I think, all member states accepted things that other member states wanted, ultimately in return for getting the flexibility they needed. So there were some things that were agreed I think as part of greening that we would argue from an environmental point of view, they don't make a huge amount of sense, and I think early in the negotiations we fought quite hard against them. Ultimately, when it comes to the end, you prioritize what's important in your own member-state and are more willing to accept things that other member-states will do that you don't necessarily agree with. So positions change quite a lot over the course of negotiations. People do become a little bit more flexible the further on we got, as long as they get what they feel they need in their own member-states. (MS 10)

Changes in the negotiation positions within the trilogue on CAP reform within the 2014–2020 EU budget, however, could be linked to alternative explanations instead of learning, and thus could be regarded as part of the negotiation process. In particular, informal methods of arriving at an agreement relatively quickly could be mistaken for constructivist learning:

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> Someone in the Commission writes a compromise proposal, which officially does not exist. The Council Presidency presents that text as proposal of the Council Presidency. Where it has been written is officially not known. . . . The presidency knows it, the advisors in the Parliament; this is an informal procedure in the trilogues. Then there is the trilogue meeting in the Parliament, where the Commission representatives arrive with their official negotiation mandate. The Commission representatives can change their position, but this requires approval by the College of Commissioners. . . . Informal negotiations to find a compromise position also strongly depend on the level of trust between the negotiators. (EC 23)

As in the drafting process, policy entrepreneurs also played an important role in the 2014–2020 negotiations. In particular, the setup of the trilogue negotiations that included only a very limited number of negotiators was well suited to knowledgeable policy entrepreneurs determined to achieve their objectives. The representative of the Council presidency was seen as such an individual, especially due to his background as a former MEP:

> He has a strong capacity to convince people. As a minister he tries to convince personally. He is very much personally involved in the negotiations. I noticed how he was with the fisheries, working until four o'clock in the morning, running around, and discussing with colleague ministers. He is very much involved. He shows a deep involvement and that it is in combination with [his experience as] . . . a member of European Parliament. . . . The Irish have a very good capacity to be very practical, to be very open, honest, and very pragmatic. They bring with them a culture of wheeling and dealing, so I think they very much have the capacity to come up with a deal and what I said about [the lead negotiator] . . . , he is I think the only minister in the Agricultural Council from the twenty-seven member states who has a life experience in European Parliament, and he knows the ways of how these guys operate. He knows them personally, so that gives him in my view an extra capacity to work with them and to come up with a deal. (MS 4)

Learning was not necessarily transferred from the individual level to the organizational level due to psychological hindering factors, especially the fear of making mistakes. There were indications that this may have resulted in the tendency in some cases to place following orders and bureaucratic path dependencies over reflection on the feasibility of measures such as sacrificing animal welfare over compliance with identification requirements. This was exacerbated by the 2008–2013 economic and eurozone crises:

> The Commission is very terrorized by [the fear of making mistakes]. And they are getting, they get of course auditors and they can have a better audit, they can't have an error rate beyond the certain percentage and all of these things are making them really afraid of doing something because they are in a financial crisis and the Euro is going to fall up but also tells them probably every day that if . . . something

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> goes wrong, it's another reason to kill the European Union, you know, UK will go out and Greece will go out and they can't have it. So they need to make sure that everything goes well, no bad press, no problems. But in all of that, they lose basically the creativity and the possibility for them to make a real difference. (ENGO 2)

In conclusion, reflection occurred on the organizational level, which is crucial for the progress of the negotiations between the policymaking organizations and the policy outcome. However, factual and experiential learning remained dominant in the CAP negotiations, whereby it could also be mistaken for constructivist learning if the reasons for changing the negotiation positions are not explored sufficiently:

> I think people involved in the negotiations [from the Commission side] generally learn from each other. They do reflect, they go to the meetings, we certainly learn, we think, but there is also a lot of defending either the status quo, which we understand, or national interests, that's very, very powerful. (ENGO 5)

Reinforcing Policy Design and Policy Detail Beliefs on the Public Goods Rationale to Preserve the Common Agricultural Policy

Similar to previous rationales for preserving the CAP by responding to the public money for public goods demands by increasing greening measures (see chapter 5 on a more detailed analysis on the origin of the public goods rationale between 1985 and 2003). The next major CAP reform for the 2014–2020 MFF continued on this greening pathway to maintain public support for subsidizing European agriculture. Key policy entrepreneurs recognized the need for further reforms:

> What we have to do in the CAP is, yes, we have to change, this is what we believe in if this policy is to have a future, yes it will have to adapt. The question is always do you want to sit in the driving seat with the industry, do we want to do it ourselves as being responsible for the policy, or do we wait until the public pressure and the pressure from climate change, and environment, until every soil is destroyed in Europe, do we wait until then until we are forced to do these changes? And the choice the Commission has made is let's take the initiative as long as we had the right to take the initiative. (EC 24)

Based on this rationale, Commissioner Ciolos emphasized the link between greening and CPI in a key statement sketching out the path of the next CAP reform, while also asking for input on a multitude of questions related to sustainable agriculture in a wide public consultation (EC 2010):

> The first communication of our Commissioner Ciolos when he came in the Commission in 2010, he made this speech on I think April 12, 2010, in the European Parliament in which he said societal justification of the huge amount of money which is spent yearly on the CAP is something we need and that was for him to

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> signal the greening policy. . . . That is a major step towards bringing in line the CAP with societal desires and bringing in the concept of societal justification of the money spent on the agricultural policy. (MS 4)

The shared underlying belief that the CAP needs to be preserved has become a conviction and central motivation for the 2014–2020 CAP reform, as a key actor pointed out:

> The public consultation supported this, but it were clearly two ideas: one is it is needed for the environment, for the soils, biodiversity, carbon leakage; it is needed for other environmental challenges. It is needed, this is our conviction, A. And B, it is needed because the public asks for goods by farmers that go beyond the food production. (EC 24)

Like in previous reforms, the European Commission did not observe as a neutral actor once its reform proposal was published. Rather, it influenced the negotiations using its expertise and acumen in steering the decision-making process:

> My understanding of [the European Commission's activities] through the trilogue process certainly is that they were very much negotiating as well and had their own negotiating strategy, had their own tactics for getting the things that really mattered to them. I mean there is a period in the negotiations where they sit back a little bit more and let member states argue it out amongst themselves, but I think ultimately it was very clearly they had their own negotiating priorities as well. . . . At the beginning, they were very defensive about their proposals, and it took a long time before they were willing to really discuss changes. It may have even been as much as a year before they explained their proposals in working groups but weren't really willing to consider any changes. In the end, they became much more flexible because they frankly just had to be. (MS 10)

Motivated by the objective to maintain the CAP as Europe's largest subsidy program, Commissioner Ciolos and his cabinet initiated a public consultation process with the intention of demonstrating the overwhelming public support for strengthening the greening and CPI components, and thus further greening the CAP. The public consultation reduced the influence of the agricultural industry lobby, as it opened a space for ENGOs and other actors in favor of more greening. Thus, it confirmed the preexisting position that more greening and CPI were needed:

> The Commission's position coincides since several years rather with our position. I know the head of the Agriculture Cabinet, I don't want to say well, but we met several times and I know reliably that the Commission wants to go into this direction. Because of that there are also the ecological focus areas, which the Commission itself proposed. (MS 4)

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Commissioner Ciolos and His Team as Policy Entrepreneurs

The European Commission not only acts on behalf of shifting public opinion and overall societal consensus, but it also takes an active role in manufacturing this very public consensus as a justification for its policy proposals and as a tactic to convince the member state's ministers in the Council.

The negotiation dynamics regarding the 2014–2020 CAP reform were fairly similar to the Fischler CAP reform. The civil servants involved in this reform were predominantly the same individuals who had already contributed to the Agenda 2000 and Fischler reforms, with some involvement even dating to the 1992 MacSharry reforms (EC 21; EC 22; EC 24; EC 25). Ciolos, the European Commissioner for Agriculture and Rural Development, was the Romanian minister of agriculture, and he acted based on his deeper beliefs and policy design beliefs that greening and CPI are crucial to maintain the CAP and used them to contribute to sustainable development, as discussed in the previous section. He decided to capture the sociopolitical consensus for strengthening the public goods model of the CAP in the next reform, with a wide-reaching public consultation that received more than 6,000 submissions from all kinds of civil society and consumer organizations, ENGOs, and farm lobbyists.

> What is a new approach we have chosen in this reform, it all started with a big political debate and a big conference where we invited all the stakeholders, and not only the farmers, and this process has been ongoing now for two years. . . . We are not doing anything else than just translating the reality out there into policy. So it's very difficult for a politician, for a minister, in any given member state to say, "I am against greening. I am against the fact that farmers should deliver more public goods. I am against better standards for biodiversity. I am against better quality of soils I am against better quality of water." It's very difficult to say that for any politician at the moment in Europe. And we are not doing anything else. (EC 24)

Participants in the 2014–2020 CAP reform suggested that the public consultation was a strategic move by the Agriculture Cabinet to demonstrate the far-reaching public support for their greening objectives:

> Oh, I think that the head of cabinet is the thinker behind the Commissioner, but that the Commissioner sketched out the direction. There was, this was tactically very skilled by the Cabinet, this relatively early integration of all groups in this stakeholder process, where was asked before any proposals were made by the Commission, what society expects from agriculture policy. . . . Then there was a big conference in Brussels around March 2010 where everyone had another opportunity to make a statement. Then they analyzed the contributions and it was cleverly orchestrated in this case that they were able to develop their ideas out of the question catalog and set their mandate. Yes, the overwhelming majority

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> of the European citizens, associations, and organizations would like to see a shift in agriculture policy towards nature, climate, and environmental protection. So, there is a demand for greening agriculture policy. This is what [the Agriculture Cabinet] concluded from this huge stakeholder process. And this was of course done very sophistically. Therefore, because you asked me about who had more influence, I think it was both, but the head of cabinet, when you talk to him, you notice that he has thought things through. He is really fascinating. And since he is from Austria, I think this comes not at a surprise, as the Austrians have always been the most progressive in implementing agri-environmental measures. (MS 4)

This strategy facilitated the negotiations with the EU member states and the opposing status quo coalition, consisting of the agricultural industry lobby and some member states. The CAP reform coalition within the European Commission thus demonstrated that there is a sociopolitical consensus in the wider public, collected the evidence for this via conferences, workshops, and stakeholder consultations, and summarized it in its policy proposal (EC 2011b, 2011c). Representatives of the European Commission thus acted again as policy entrepreneurs to orchestrate convergence on a common position that was as close as possible to their original proposal.

A further motivation of both commissioners Fischler and Ciolos was to leave a legacy by putting their mark on the CAP with the reforms that would be named after them. Fischler commented on the motivation of leaving a legacy at a meeting of European agricultural economists:

> Franz Fischler was there and he described, paraphrasing, the [2014–2020 Ciolos] reform as a "compromise of a compromise, and if you get too many alterations of that compromise process, then it does get certainly into the danger of being too wishy washy and insignificant, and he [Ciolos] must be mindful of the importance of a commissioner's legacy, and I am sure Ciolos would want to leave his mark on the process of CAP reform, and there is a big potential in greening, and there is also the beginning of the budgetary conversion process, and I guess his legacy would be partially dependent on the performance of these two negotiations." (EP 10)

Overall, the 2014–2020 Ciolos Reform of the CAP was not as successful in its greening components as many key actors had hoped, particularly due to the dominant role of the member states in their calls for flexibility:

> You might criticize the Commission from an environmental perspective that the proposals were not going far enough. DG Agri had a very clear approach to say "This is our approach. We have a very sensitive balancing of everything," and maybe that might have been the mistake. It's also my personal opinion and observation that the Commission went in with too little negotiation material concerning the greening. If you had put a 10 percent clause for example or 10 percent requirement on focus area, maybe they would have cut out not so much.

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> If you had put some more cross-compliance requirements, they would have cut it down, but not everything, but it was only a few additional ones so almost none remained. This might have also been a reason but maybe or maybe not, because as I said, it was mainly the [Multiannual Financial Framework] problem with having much less money to spend and other much more important political issues like internal-external convergences, which were basically overriding any in-depth discussion or more in-depth political fighting about the greening, and this is also how it turned out. (EC 19)

One reason why learning that took place during the drafting and negotiation processes was not necessarily reflected in the policy outcome was the lack of a window of opportunity, which would be comparable to the perfect storm (Swinnen 2008a) that the 2003 Fischler-Reform benefited from:

> 2001 was the Swedish presidency, the Göthenburg Summit, and Sustainable Development Strategy, so that had already been in the making for three years so 1998, 1999, 2000. . . . So almost the zeitgeist at that time was moving in these directions, and obviously you'll have read that Sustainable Development Strategy in 2001, and there were parts of that that were quite modern. In 2002 we had the ten-year anniversary of the Rio Summit in Johannesburg. The climate then was quite a lot of business and industry was coming for the first time towards the sustainable development agenda. . . . There were signs, genuine signs, of concern at climate change, at resource issues. The beginnings of them at least, and then the [re was the] five-year review of [the] Sustainable Development Strategy . . . [overseen by the] Austrian presidency [in] 2006, so the Austrians took sustainable development pretty seriously. I think the other thing is that it's a lot easier when you're 12 members or 15 members than when you're 25, 27, or 28 member countries and I think that's made a lot of difference in terms of effective change, leadership change. I don't think Ciolos could do today as easily at what Fischler could have done with a smaller group of member states. (ENGO 9)

Leadership by the Commissioner for Climate Action on the 20 Percent Climate Mainstreaming Decision

In parallel to the CAP reform, the DG Clima also introduced the proposal to dedicate 20 percent of the EU 2014–2020 budget to CPI measures (EC 2011a). This decision in the College of Commissioners came about because Connie Hedegaard, the Commissioner for Climate Action, can also be regarded as a key policy entrepreneur who built political momentum and convinced other decision-makers with a combination of expertise, experience, and passionate rhetoric:

> Oh, she is a very strong person, with her own views and a lot of self-confidence, as most politicians have . . . she is very clever and hard-working and very

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> energetic, . . . and she has integrity, has a drive, and she has political communication skills. (EC 16)

The circle of individuals involved in the CAP CPI components within the European Commission was fairly small. Across all levels of the hierarchy, they were very dedicated; they possessed high expertise and long-standing experience in agriculture, climate issues, and EPI; and they actively promoted the introduction of climate objectives into agriculture and the overall EU budget by using and extending their existing networks with their relevant counterparts within the European Commission (EC 14; EC 15; EC 16; EC 17; EC 20). Coordination and cooperation were crucial, as CPI was not a policy proposal in its own right, but rather consisted of interventions in other directorate generals' resorts, which frequently results in resistance on the policy-drafting level (EC 14; EC 15). If these are not resolved, they are carried "up the hierarchy" (EC 14) into the College of Commissioners meeting without much opportunity for other policymakers to reflect on the input and engage with the context:

> But we just pushed it through because we saw the political opportunity that this budget could look different if it had a headline target that sold it as a green, more modern, innovation-based EU budget. It would sell well with the public, and I think Barroso understood that. So we were talking more political than analytical. It was the best vehicle we could find for mainstreaming into other policies. . . . But the budget was a really big thing. Because it sets the parameters for the EU's spending programs until 2020. And given that we had a 2020 target and a 2020 strategy, we had to put that, we had to reflect that into the budget; otherwise there was a disconnect. So these were the sorts of arguments we were using. And then, [the European Commissioner for Climate Action] was persuasive in the College [of Commissioners], we got a lot of nervousness in the end whether they had put it in, but they did. But it was literally in the college meeting where it was decided. (EC 15)

Consequently, the EU 2014–2020 budget was seen as an opportunity for CPI by the directorate general who is in charge of this issue area and who consequently used negotiation tactics to achieve their objectives with the help of passionate policy entrepreneurs. These policy entrepreneurs were crucial for policy outcomes to emerge, but in the negotiation process, they were not necessarily teaching the other policymakers about the importance of their proposal. Instead, they used bargaining tactics, rhetoric, and their own passion and expertise to push their proposal through (EC 14; EC 15; EC 16; EC 24; EC 25; Moehler 2008; Pirzio-Biroli 2008). This demonstrates that leadership by policy entrepreneurs and path dependencies of the institutional machinery can also result in policy outcomes. The learning may have happened before such a policymaking process and can reach back

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decades when the policy entrepreneur formed their deeper and policy design beliefs, which motivated the leadership in the current policymaking process. The institutional machinery created a certain path dependency in carrying policy proposals through the decision-making process initiated by policy entrepreneurs, partly through following orders and partly through the personal convictions of individuals.

However, even if actors took on the role of teachers in the negotiation process, that does not necessarily mean that they succeed and the counterpart learned by being convinced, or at least gaining more knowledge. Not all actors accepted the rationale used by the European Commission that society required the CAP financial resources to support public goods such as the environment:

> It didn't convince much of the people actually. Of course, it was farm ministries in the Council. We always were pointing out that the big bill comes in the end in 2020 whether there's a real justification. It didn't impress so much, and especially some MEPs in the conservative party said, "What you're saying, public money for public goods, I don't know where you got it from. Maybe from some green NGOs but my people who elect me have a different opinion and I follow that opinion of the people which elect me" which is rural area farmers for most of them. So very clearly it didn't impress very much. (EC 19)

The situation was similar in the Council:

> It's so many different . . . issues, on some [the European Commission] persuaded member states a bit, but actually, if member states were unwilling to agree on changes to the status quo, that would mean any additional burden, any additional financial cost, and I think even on issues where the Commission argued quite long and fiercely that this wouldn't make much of a change to member states. Some of the new financial rules under the horizontal regulation, the member states weren't convinced. Certainly on some things. I mean it's just a whole mixed bag on some things the Commission's argued on, but I think actually in the end, less than I thought might be the case. (MS 10)

Overall Learning in the 2014–2020 Common Agricultural Policy Reform

In this and the previous chapter, I have drawn a complex and detailed picture of the different types of learning that occurred across the individual and organizational levels over three decades. I showed how learning on one level could coincide with policy outcomes, but these outcomes are not necessarily a result of learning. I also demonstrated the importance of individuals who act as policy entrepreneurs based on their underlying beliefs, thus becoming agents of change and influencing the policymaking process toward a policy outcome. Yet again, other explanations besides learning,

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such as lobbying, power politics, and bargaining in negotiations also partly explain the policy outcome. Constructivist learning via changes in beliefs among the actors occurred in terms of aligning policy design and policy detail beliefs to the unchanged deeper belief of preserving the CAP overall.

The changes predominantly occurred in the form of policymakers recognizing shifting preferences in the sociopolitical landscape and, within individuals, in the form of increasing knowledge and gaining work experience with CAP reforms, while the main motivation was to adapt the CAP via greening to maintain it—and thus adapt policy design and policy detail beliefs to the stable central deeper belief about the priority to subsidize European farmers. The mainstreaming and greening proposal of the 2014–2020 CAP reform appears as a policy innovation. This is not the case when the modus operandi of thirty years of CAP reform is taken into consideration. Then the latest CAP reform emerges as a logical next step toward a strong public goods model in a long line of marginal adjustments of policy detail beliefs. The greening aspects of the CAP are built on developments dating to the 1980s. CPI in the CAP is a further development from greening the CAP through the MacSharry (1992) and Fischler (2000–2003) reforms in order to increase the legitimacy of the subsidies paid to farmers (suggested by Feindt 2010; Swinnen 2008a). It was reframed as public money for public goods narrative, of which climate action and environmental protection are key elements.

Which type of learning occurred on the individual and organizational levels depended on several factors. The key issues were the interplay of long-term learning in the form of shifting beliefs among the wider society that set the political framework parameters. It also depended on whether individuals found the time to reflect on new input and were subsequently able to convince their organizations of its importance and the resulting necessity to change the organization's negotiation position. The key drivers for policy change were policy entrepreneurs in key positions who had the opportunity, knowledge, and personal drive (as well as conviction) to steer the political process into their desired direction using predominantly conventional negotiation tactics to outsmart the other coalitions, mostly using conventional political maneuvering.

Experts involved in developing a policy proposal did reflect on information presented to them by external experts and stakeholders, but in many cases, they were already familiar with the information. By the same token, most experts involved in greening the CAP already held beliefs favoring environmental protection and increasing climate action, and this did not change by being involved in reforming the CAP or the wider mainstreaming of climate objectives into the 2014–2020 MFF. Table 6.1 provides an overview on the research findings for learning in integrating

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Table 6.1
Learning in the 2014–2020 CAP reform

	Factual Learning	Experiential Learning	Constructivist Learning	
Individual level	Yes but limited: Some MEPs through stake-holders; experts reflect on new scientific input	Yes: MEPs (first involvement); marginal for experts due to iterative process; experts learn from experience with past round of reforms	Deeper beliefs	No change: Farmers, member states, European Commission, MEPs
			Policy design beliefs	Yes: Change over longer term in moderate-reform coalition through acceptance that environmental protection matters to public; the CAP needs to adapt to maintain public acceptability
			Policy detail beliefs	Yes: Change over long-term in line with deeper beliefs; Limited change in short-term
Organizational level	Yes: Increase in knowledge due to reflection on emerging scientific consensus on negative environmental impacts of the CAP; influence of climate change debate as policy frame	Yes but limited: Iterative process (policy reform)	Deeper beliefs	No change
			Policy design beliefs	Yes: Longer term in moderate-reform coalition through acceptance that environmental protection matters to public; the CAP needs to adapt to maintain public acceptability; limited change in short term
			Policy detail beliefs	Yes: Change over long term in line with deeper beliefs; limited short-term change

climate policy while designing and negotiating the legislative proposal for the 2014–2020 CAP.

The data indicates that some learning occurred, especially factual and experiential learning through reflection on scientific evidence and involvement in policymaking. However, constructivist learning in the form of changes in underlying beliefs occurred only via the sociopolitical landscape over the long term, with the change in policy design and policy detail beliefs that the CAP must also serve environmental and climate concerns with a public money for public goods rationale that was adopted by key individuals as an argument to preserve the CAP. Thus, these beliefs on the wider CAP objective changed among actors in the moderate-reform coalition on the individual level in a long-term perspective to reflect the overall societal consensus for a public goods model. From the individual level, they were transferred to the organizational level, which represents the policymaking machinery between the directorate generals of the European Commission, the European Parliament, and the Council of the EU.

For many actors, however, it served the primary function of justifying the continued existence of the CAP as Europe's largest subsidy program, and thus the public goods narrative also points toward other explanations than constructivist learning, which influenced the organizational level. These include political interests, lobbying, and bargaining in negotiations. Policy entrepreneurs who formed their deeper beliefs before being involved in the CAP reform process played crucial roles in the negotiations for the success of the policy proposal. They used conventional negotiation tactics and strategies. The findings regarding the sociopolitical landscape indicate that it can be a driver for learning when a long time frame is chosen for the analysis, such as reaching back three decades.

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7 Comparison of Learning across Cases

A number of generalizable findings emerge when comparing across cases. There is a difference between factual, experiential and constructivist learning in European policymaking and earth system governance. Furthermore, other factors besides learning, such as power politics, institutional machinery, and defensive avoidance, can have a similar explanatory power for policy change. Crucial determinants for learning are the kind of beliefs each coalition of actors holds and whether these beliefs are compatible with the other coalition's beliefs, and thereby their policy objectives. The time factor (i.e., when key actors formed their deeper, policy design, and policy detail beliefs) also matters. Depending on the time frame, learning can be included or excluded as a relevant factor influencing policy change. There is also a link between the European Commission as a collective policy entrepreneur and individual policy entrepreneurs, who either act according to preexisting deeper beliefs, change them as a result of wider developments in the sociopolitical landscape or change their beliefs as a result of input provided during the policymaking process. Table 7.1 summarizes the findings on learning across the four cases of the energy and transport components of the RED, as well as the early and more recent greening of the CAP. Overall, learning occurred across cases and subcategories except for deeper beliefs, as these were usually formed decades before the time frame of analysis, often during actors' youth or early adulthood (thus, they are labeled as limited). Conflict emerged in cases where actors held conflicting policy and policy detail beliefs as a result of constructivist learning among only one group of actors.

The Sociopolitical Landscape as a Driver for Learning and Policy Change

Wider changes in how society perceives environmental, economic, and social challenges, as well as subsequent changes in political framework conditions,

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Table 7.1
Comparison of findings on learning across cases

Learning	RED	Biofuels/ Renewables in Transport	CAP, 1985–2003	CAP, 2004–2020
Individual level				
Factual learning	Yes	Yes	Yes	Yes
Experiential learning	Yes	Yes	Yes	Yes
Constructivist learning—Deeper beliefs	Limited	No	No	No
Constructivist learning—Policy design beliefs	No	Yes	Yes	Yes
Constructivist learning—Policy detail beliefs	No	Yes[a] and no[b]	Yes	Yes
Organizational level				
Factual learning	Yes	Yes	Yes	Yes
Experiential learning	Yes	Yes	Yes	Yes
Constructivist learning—Deeper beliefs	No	No	No	No
Constructivist learning—Policy design beliefs	No	Yes	Yes	Yes
Constructivist learning—Policy detail beliefs	No (only strategic)	Yes[a] and no[b]	Yes	Yes

[a] environment-focused coalition.
[b] economy-focused coalition.

played an important role as drivers for learning. Nilsson (2005), Nilsson and Eckerberg 2007), and Feindt (2010) focused in their empirical analysis on changes in the wider policy frames on what can be regarded as the sociopolitical landscape (e.g., from energy as risk to energy as market [Nilsson 2005]) and outlined wider societal support for changes in policy. They used shifts in the way that energy policy is framed as evidence of learning. Similarly, Feindt (2010) concluded that learning occurred in the overall process of introducing greening aspects into the CAP. The findings point toward shifting policy frames over three decades that were influenced by wider sociopolitical perspectives and overall shifts. In that sense, Nilsson's (2005) findings have parallels to the analytical dimension of the sociopolitical landscape, which accounts for overall shifts in how society and the wider political spectrum, including dominant economic actors and voters, see and frame the issue and determine framework conditions, as well as entry points when learning occurs among individuals and governmental organizations.

In the case studies looked at in this book, policymakers' perceptions of societal changes and shifting public preferences provided the driver for policy development. Interviewees pointed toward hallmark events on the

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international level, such as the 1972 Stockholm Summit/UN Conference on the Human Environment (Biermann, Davies, and Grijp 2009), as the origin of integrating environmental aspects into energy, transport, and agriculture policy. This coincided with a bottom-up movement of environmentalists, green political parties, and the founding of many major ENGOs that subsequently entered the political sphere to represent environmental interests (Olper 2008).

The next big push toward environmental and climate considerations came at the international level, with the 1987 Brundtland Report and the 1992 Rio Earth Summit, where governments agreed on the Agenda 21 plan and the Rio Declaration on Environment and Development. They also established the United Nations Convention on Biological Diversity and the UNFCCC, which agreed on the Kyoto Protocol in 1997 (Wijen and Ansari 2007). This resulted in pressure on the EU to implement its international commitments by setting up climate policies. The EU needed to save face by delivering on the international commitment and leadership role that it had taken (Jordan et al. 2010; Schreuers and Tiberghien 2007). Both civil servants at the European Commission and political decision-makers pushed for renewable energy policy and began to develop policy proposals for what became the Renewable Electricity Directive (EU 2001) and the Biofuels Directive (EU 2003a), with an indicative target of 5.75 percent biofuels in the fuel mix by 2010.

Following a reflection on and learning from the failure of the UNFCCC conference in Copenhagen in 2009 to agree on an universal and legally binding climate treaty covering all countries (Monheim 2014), the EU continued its leadership role on the international level by unilaterally agreeing to extend the expiring Kyoto Protocol in 2012 in exchange for a commitment by major developing economies to work toward a post-Kyoto agreement by 2020 (Rajamani 2012). This paved the way for the Paris Agreement to be agreed in 2015 and go into force in 2016 (Falkner 2016). Learning played an important role in facilitating the Paris Agreement based on the participants' reflecting on previous negotiation experiences (Rietig 2019b).

An important driver for greening in the CAP was the more formalized and professionalized political representation of environmental interests that has taken place since the 1990s, which provided a balance to the interests of established actors such as industries across the agricultural, energy, and transport sectors. In the case of the CAP, the influence of environmental actors increased to the point where they counterbalanced the agricultural lobby in some aspects that was seen as the most powerful and

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influential actor until the late 1990s due to its close links to agricultural ministries in the European member states and the revolving doors of political representation on the European Parliament's Committee on Agriculture (ENGO 1; ENGO 2; ENGO 4; ENGO 5; ENGO 8; ENGO 9). ENGOs influenced public opinion via the media, spectacular protest, and scare campaigns, and they also networked themselves into political decision-making circles as so-called green lobbyists, thus becoming an important actor capable of countering the agricultural lobby's influence to a certain extent (as pointed out by EP 4; Industry 1; Industry 2; Industry 3; Industry 4; Swinnen 2008a).

The activities of ENGOs, the political success of green parties, emerging food scares of the 1990s such as bovine spongiform encephalopathy (BSE), and increasing awareness of and public support for animal welfare accumulated to leave an impression among the political decision-makers that there was overall societal support for greening agricultural practices and a demand to deliver on public goods. Such key public goods include preserving the landscape, providing environmental services, and supporting sustainable development in a manner that preserves critical environmental capital for future generations. At the same time, there was strong criticism of agricultural intensification and wasteful use of tax money for a policy that distorted world food markets and required even more financial resources to dispose of overproduction (EC 24; Swinnen 2008b, 142). Environmental actors also facilitated the increasing of public support for renewable energy policies; however, they played only a secondary role in the early development of renewable energy policy between the 1970s and 1990s.

Renewable energy policy (and with it biofuels policy) was also motivated by wider developments in the sociopolitical landscape and overall popularity until 2007. Renewable energies were framed by decision-makers predominantly as alternative energy sources to fossil fuels, which carried the hope of reducing the high dependency on politically unstable alliances with countries in the Organisation of Petroleum-Exporting Countries (OPEC) and the former Soviet Union. Renewable energies also promised local economic development, as their deployment had a more local character than did the import of fossil fuels. These two factors, combined with the fact that renewable energy faced less major opposition than, e.g., nuclear power, prompted the European Commission to conclude that there was a wider societal consensus in favor of renewable energy's overall desirability (EC 1). This perception of a wider consensus also had a positive effect on local decision-makers, who supported policies that facilitated the uptake of renewable energy and grouped together in transnational city networks such

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as the Covenant of Mayors and the International Council for Local Environmental Initiatives (ICLEI), which were also supported by the European Commission (EC 1). Biofuels and biomass, which have been used as alternative fuels in agriculture since the 1980s, played a special role as a means of local economic development and energy security.

Furthermore, the greening of agricultural policy emerged as a necessity in the 1980s, and especially the 1990s, to sustain public support for Europe's largest transfer program of public funds. Policymakers felt the pressure to adapt the CAP before the public pressure to "scrap the CAP" (EC 24) became too strong. This was regarded by many interviewees as the most important external driver induced by the sociopolitical landscape for policy development toward greening in the CAP. The pressures in renewable energy and transport policy were similar, although the window of opportunity was defined more by understanding renewables as an opportunity for economic development and a means of improving energy security.

It is important to note that all three policy initiatives (i.e., renewable energy, biofuels, and greening the CAP) existed due to motivations other than climate mitigation. Only later, as climate change became a strong public concern (i.e., was reflected in the public mood), renewable energy and greening measures in agricultural policy were reframed as contributions to climate mitigation via low-emission energy production and increasing green vegetation as carbon sinks. The sociopolitical consensus that climate change needed to be addressed via reducing greenhouse gas emissions emerged in the mid-2000s during a window of opportunity. The economic situation was seen as favorable enough to allow for topics such as the environment and climate change to enter the political agenda. Policy entrepreneurs such as Al Gore, with his movie *An Inconvenient Truth*, succeeded in further raising public awareness of climate change and in strengthening a sense of urgency (Guggenheim 2006). The Intergovernmental Panel on Climate Change (IPCC) report (IPCC 2007) and the Stern review (Stern 2006) provided the scientific and economic evidence to act on climate change earlier rather than later. These and further developments resulted in a major shift in the wider policy landscape in support of climate change policies, and thus opened a window of opportunity for reforms (Carter and Jacobs, 2014) in the CAP and European renewable energy policy to take these changed political and social framework conditions into account.

In conclusion, the motivation for policies can frequently be found in the sociopolitical landscape. It includes the policymaker's *perception* of wider public opinion, political or societal consensus in support of a certain policy option, and wider windows of opportunity such as overall support

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for climate change policies due to a higher awareness of the problem and willingness to accept regulation. A further determinant in the sociopolitical landscape is the political power of certain political parties and groups representing interests of specific nonnational actors (Ackrill, Kay, and Zahariadis 2013; Zahariadis 2013). The wider drivers for policy change *can* include developments in the sociopolitical landscape such as new actors, overall public support for renewable energy, changing social demands, and new areas of public concern, including climate change. One more recent example is Fridays for Future, a global youth protest movement inspired by the teenage social activist Greta Thunberg, who has taken a policy entrepreneurial leadership role by increasing the sense of urgency to act on climate change. Students and youth activists from across the world created public pressure via regular demonstrations starting in 2018 and continuing until the COVID-19 crisis in 2020 confined activism to the digital sphere. These shifts in the sociopolitical landscape are a motivation for actors to reflect on the changed framework conditions and subsequently to adapt existing policies or design new policies—but they are not necessarily learning.

When and Why Decision-Makers Learn

Of those contributions that examined learning among individual policymakers and learning on the organizational level, the majority analyzed learning types that could be summarized as factual and experiential learning, including political learning among individuals (e.g., Braun 2009; Dunlop 2009; May 1992; Montpetit 2009) and instrumental/governance learning on the organizational level (e.g., Dunlop 2010; Dunlop and Radaelli 2017; Eising 2002; Feindt 2010; Heikkila and Gerlak 2013; Koch and Lindenthal 2011; Radaelli 2009; Schout 2009).

Factual and Experiential Learning on the Individual Level

There are different aspects of factual and experiential learning among policymakers. The preexisting knowledge and experience determines how steep the learning curve of the policymaker is (for more details, see Rietig 2018a). Civil servants at the European Commission were frequently technical experts who often had decades of working experience in the policy field and/or a related educational background that was evidenced by postgraduate degrees in the policy area, including PhDs or even postdoctoral research. Their learning curve thus remained incremental, as they were adding to an already vast pool of expertise. The learning curve was much steeper for politicians such as the MEPs, particularly in agricultural policy,

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where they were involved via codecision for the first time in the 2014–2020 CAP reform and EU budget negotiations (Costello and Thomson 2013). The European Parliament has maintained its track record in strengthening environmental policy despite the economic and Eurozone crises and rising populism (Burns 2019). MEPs pointed out the time and workload constraints they were under and their resulting inability to acquire expert knowledge on the issue.

In this sense, the individual learning among MEPs was very similar to the way that individuals in management positions at the European Commission learned who had limited previous knowledge and experience in the policy field. These individuals predominantly learned by being involved in the process, listening to their technical experts in meetings with representatives of other European institutions or external actors. Learning among managers and technical experts was thus different. While the technical experts added to their knowledge and experience by reading detailed technical scientific studies (e.g., on carbon accounting) and specifications for technologies such as heat pumps and were engaged in energy modeling exercises, the managers called on their experts to represent the European Commission in meetings with other policymakers. By being involved in the negotiations and listening to their experts, the managers gained experience and accumulated factual knowledge around the technical and political arguments, as well as rationales for proposing a certain course of action. Consequently, it can be concluded that individuals engaged in factual and experiential learning while being involved in the policymaking process, arguing and defending their positions, and discussing with other actors the scientific bases of reports and studies.

The biofuels aspect of the RED demonstrates that the degree to which scientific knowledge was contested also influenced individual learning. The contested knowledge resulted in a more intense factual and experiential learning process among the individuals involved, as they needed to find scientific studies to back up their (politically predetermined) arguments and to defend their proposed course of action by explaining scientific data to the opposing coalition. With the first reform to the RED in the form of remedying the negative effects of biofuels in terms of indirect land use changes in 2015, as well as the second reform in 2018–2019 for the period between 2020 and 2030, the actors involved in this process continued to debate the technical details of carbon accounting and land use changes. This debate was less focused on broader political considerations than on knowledge-based aspects, which required policymakers to understand the methodology behind the scientific studies, which provided different results

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depending on the modeling approach taken. Thus, they were involved in an intensive factual and experiential learning process that was described by a key member of the policymaking community as "going to the University of Biofuels" (EC 5). These differences in how individuals learn during policymaking based on their roles and positions remain underexplored in the relevant literature, given the predominant focus on learning on the organizational level (e.g., Dunlop 2010; Feindt 2010; Koch and Lindenthal 2011; Radaelli 2009; Schout 2009), on management reforms and its administrative consequences (Bauer 2008), or on comparative survey research (e.g., Montpetit 2009). Exceptions include Page and Wouters (1994), who provided details on the educational backgrounds of EU policymakers in their study on political leadership and bureaucratic politics in Brussels; and Dunlop (2009) and Montpetit (2009), who compared learning among policymakers in the EU and the United States, but without paying particular attention on how their role influenced their learning.

The Type of Belief Matters: Policy Design and Policy Detail Constructivist Learning to Protect Deeper Beliefs

Deeper beliefs and policy design beliefs were more difficult to change than an addition in knowledge or experience, and thus they can be regarded as fairly stable. Individuals even went so far as to engage in factual and experiential learning, as well as political maneuvering, in order to avoid having to change their deeper and policy design beliefs. They also preferred to engage in constructivist learning by adapting their policy detail beliefs to satisfy society's wider policy preferences. These findings follow the academic literature on the Advocacy Coalition Framework (ACF), which emphasizes how virtually impossible it is for deep core beliefs to change (Sabatier 1988; Sabatier and Jenkins-Smith 1993; Weible, Sabatier, and McQueen 2009). Deeper beliefs, however, are weaker than deep core beliefs, but stronger than Sabatier's policy beliefs. The empirical data suggests that there is a category of beliefs between the absolutely stable deep core beliefs (i.e., a person's fundamental understanding of the world), and how overall policies should appear to address a specific policy problem. There are beliefs that are deeper than this, which are based on a person's opinion about whether global problems such as climate change matter (deeper belief) and whether they should be addressed via policy (policy design belief) and what exact policy instrument should be used, such as emissions trading (policy detail beliefs; see chapter 2).

Sabatier and Jenkins-Smith (1993) also pointed out that individuals change their secondary beliefs (i.e., policy detail) beliefs to protect their

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policy beliefs, and especially their deep core beliefs. Actors adapted their policy detail beliefs to changing wider sociopolitical circumstances in order to protect their policy design and deeper beliefs about the necessity to maintain the CAP, and thus they were willing to introduce increasingly ambitious greening measures over several reform cycles. The other dimension of constructivist learning on the individual level includes the extent to which deeper and policy design beliefs are formed over the long term and how they change parallel to wider changes in society's policy preferences and deeper shifts in beliefs within the sociopolitical sphere.

This is the key link that was missing in the previous contributions that conceptualized learning as shifts in the sociopolitical landscape (e.g., Feindt 2010; Nilsson 2005; Nilsson and Eckerberg 2007). Mere shifts in the public mood and wider political, problem, and politics streams (Kingdon 1995) can be interpreted as learning themselves less than as drivers for learning. These shifts in the sociopolitical landscape, however, can result in individuals' changes of beliefs, and thus constructivist learning, provided that the individual *reflects* on these inputs. What frequently happened, however, is that the driver in the sociopolitical landscape did not lead to constructivist learning, but rather to factual and experiential learning aimed at instrumentalizing the policymaking process to achieve predetermined objectives, also referred to as political and instrumental learning in the literature (e.g., Radaelli 2009; Zito and Schout 2009) that *appeared* to be constructivist learning.

In line with overall shifts in the sociopolitical landscape, key actors pointed out in interviews that they had reflected on the evidence provided by the IPCC and publicized by such media as *An Inconvenient Truth* (Guggenheim 2006). That movie's key message was that climate change exists and is an increasing problem that needs to be urgently addressed by policy. This can be understood as the formation of a policy design belief on the individual level that something needs to be done about climate change. This rather abstract conviction increased policymakers' willingness to reflect on policy detail beliefs regarding the exact policy design. Policymakers who adapted their policy design beliefs in the 2010s reported the adoption of the Paris Agreement in 2015, the Fridays for Future student protests in 2019 and the increasing number of climate-related weather extremes such as droughts, flooding, and tropical storms and wildfires as crucial events leading to *reflection* and subsequently changing beliefs on climate change.

Yet it is important to keep in mind that agricultural and transport policy have only limited inherent links to climate policy, with their primary objectives of providing sufficient quantities of food or facilitating the transport of people and goods at a reasonable price and quality. There was pressure

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both on DG Agri and DG Energy to integrate climate objectives into agriculture and energy policy due to overall societal demands. In the case of the CAP, key actors pointed out that it was important to take preemptive steps to maintain an overall social and public acceptability of Europe's largest subsidy program. This required them to listen not only to the demands of farmers, but also those of environmental and social NGOs representing citizens (i.e., taxpayers' and consumers' interests). Key actors thus understood the importance of changing the policy to satisfy the interests "of the other 97 percent" (EC 24). This can be understood as a change in policy detail beliefs among key actors: policymakers changed their perspective on how a specific policy instrument should look and which stakeholder group it should primarily benefit. In the RED, the overall reframing of renewable energy as climate mitigation placed new demands on policymakers who understood renewable energy as equally serving the objectives of energy security, economic development, and climate mitigation.

This seemingly constructivist learning on the individual level in terms of changing policy detail beliefs is instrumental learning, as the overall policy design belief of policymakers did not change because they were still primarily worried about having a policy framework that facilitates agricultural production, food security, and the secure provision of affordable energy. Although most key actors developed a policy design belief since the 2000s that something needed to be done about climate change, and thus they were more willing to integrate climate objectives into their own policy area so long as it did not contradict their actual policy design beliefs, this policy design belief did not emerge as the dominant driver. Key actors pointed out instead that it was important to integrate environmental and climate objectives to maintain enough public legitimacy and acceptability for the continued existence of the CAP and to strengthen renewable energy policy. Thus, the change in policy design beliefs over the medium term to integrate environmental and climate objectives into the CAP and energy policy can be attributed to the instrumental learning undertaken to preserve the CAP as Europe's largest and oldest subsidy program as the primary motivation and as the conflict in policy design beliefs among renewable energy policymakers who regarded energy security and rural development as equally important to climate mitigation.

This may be a particularity of the CPI focus inherent to the selection of case studies. In all cases, governmental organizations were required to integrate climate and environmental objectives into their core business. In the biofuels case, the objective of reducing greenhouse gas emissions was followed so long as it coincided with the objectives of improving energy

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security and supporting economic development, the other two equally important objectives. After the scientific evidence regarding the mixed climate performance emerged and the environment-focused coalition changed their policy detail beliefs in line with their deeper beliefs of principled environmental and climate objectives, the underlying but diverging deeper beliefs resurfaced beyond the shared policy design belief that climate mitigation is important. Faced with a choice, the economy-focused coalition refocused on their other two core objectives: namely, energy security and rural economic development, which were still uncontested and could be furthered by a 10 percent target of renewable energies in transport, even if it was a de facto target of 10 percent biofuels given the technological limitations.

Ultimately, these case study findings point toward a wider trend, as they confirm what Radaelli (2009) and Koch and Lindenthal (2011) discovered when they concluded about instrumental and political learning in the European Commission as responses to the requirement to take into account the findings of regulatory impact assessments (Radaelli 2009) or comply with demands for EPI (Koch and Lindenthal 2011). In particular, the similar finding of Radaelli (2009) on the use of regulatory impact assessments to inform policy choices, as well as May (1992) on the dominance of political learning resulting in policy failure in several case studies across policy areas, indicate a wider relevance of these findings beyond CPI toward other policy areas that are faced with conflicting objectives.

Situating the Empirical Findings in the Wider Context

In the case studies examined in this book, experiential and factual learning among individuals was especially dominant due to their involvement in the policy process. Constructivist learning as changes in beliefs based on experiential or factual learning remained rare. These findings fit within the larger picture of previous findings in the literature, while offering a novel interpretation and fresh perspective.

Koch and Lindenthal's findings (2011) could be interpreted as suggesting that the directorate generals for Energy and Transport (DG TREN/from 2010 DG Energy), as well as DG Enterprise, engaged in nonlearning and experiential learning when they were confronted with DG Env's increasingly institutionalized EPI measures, which invaded and partly contradicted the other directorate general's core measures. Actors refused to reflect, ignored orders, or engaged solely in lip service when following orders. These findings are closely related to defensive avoidance, explained in detail by Janis and Mann (1977), and political learning in order to protect deep

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core and policy beliefs, emphasized by Sabatier (1987; 1998) and subsequent literature reviews (Bennett and Howlett 1992; Zito and Schout 2009).

The findings by Dunlop (2010) on dominant single-loop learning, which was used and conceptualized linking back to the organizational learning literature (Argyris and Schön 1978), were confirmed by the interviewees involved in the biofuels controversy that evolved from 2007 onward after Dunlop's analysis ended. They emphasized experiential and factual learning individually and on the organizational level, including getting better at using tactics to defend their objectives against the other coalition in the decision-making process within the European Commission and among the European institutions. Dunlop (2010) offered an interesting interpretation to the decision by the UK Department for Transport to ignore the scientific evidence on the negative climate effects of first-generation biofuels by justifying this behavior as single-loop learning by doing to grow the biofuels industry, and thus gain a competitive advantage on more climate-friendly second- and third-generation biofuels from nonfood crops. She also pointed out that this type of single-loop learning is more feasible for governmental organizations than the disruptive double-loop learning of changing objectives.

The empirical findings of the biofuels controversy of 2007–2018, however, show that this is the case only so long as there are no competing coalitions as a result of one group changing its goals and policy detail beliefs about policy instrument design based on the new scientific evidence. This reluctance on the part of the economy-focused coalition to act on the new scientific evidence (and thus to engage in what Dunlop refers to as double-loop learning) led to the controversy, which required the secretary general of the European Commission as a policy broker to intervene and force a policy outcome—which thus was not the direct result of learning. In turn, the policy outcome of the RED resulted in the need to reform the biofuels component in 2012 by limiting the indirect land use changes of first-generation biofuels. This became more difficult in 2012 than in 2008–2009, as in the meantime, member states heavily invested in biofuels, farmers found a lucrative side business to food production, and the biofuels industry has a stronger lobby to defend its interests with the support of the agriculture lobby. This time delay thus resulted in a path-dependent policy favoring the continued use of first-generation biofuels as vested interests formed (Rietig 2018b).

As a consequence, had constructivist learning occurred between 2004 and 2007 when the new scientific evidence emerged, the policy outcome might have been different enough to avoid the strong uptake of first-generation biofuels by the industry and the strong economic interest in

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maintaining first-generation biofuels given the heavy investment by member states, farmers, and the grown biofuels industry. Thus, the implications of the case study on biofuels are that Dunlop's normatively good single-loop learning-by-doing contributed to a politically delicate situation and controversy that strengthened the path dependency of the 2003 Biofuels Directive and made a change in policy outcomes very difficult to achieve in the future due to the strengthened vested interests in maintaining the new status quo of first-generation biofuels. In other words, learning by doing led to a lock-in into first-generation biofuels and hindered progression to second- and third-generation biofuels, with expectedly less negative impact on climate mitigation. Thus, there are links to what Levin et al. (2012) refer to as sticky policies, yet on the side of unintended consequences. Feindt's (2010) focus on wider shifts in the CAP make a comparison with the findings on the individual and organizational levels difficult, as this aspect was not included in his empirical findings. This makes the discussion of the expert background of key actors in the CAP and their relevance to learning a novel contribution. The contributions in Swinnen (2008a) pointed toward the importance of policy entrepreneurs but did not link their behavior to learning.

Factual and Experiential Learning as Normal Learning

Factual and experiential learning among individuals can be regarded as part of the European policymaking process in both the RED, with its biofuels component, and the greening of the CAP. It is, however, a normal or routine occurrence that is inconsequential for the policy outcome (Rietig and Perkins 2018). Yes, individuals did learn, and the more expertise they had and the more sophisticated their understanding of maneuvering through the policymaking machinery was, the better they were able to influence the policymaking process in line with their political objectives. But in that sense, learning remained instrumental to achieve a certain objective such as developing a policy proposal and riding the rapids of the political decision-making process well enough to fulfill one's job description.

Most of the policy learning literature explores this aspect of learning when it talks about instrumental learning (May 1992), political learning (Radaelli 2009), social learning (Feindt 2010), government learning (Bennett and Howlett 1992), or compliant/noncompliant single- and double-loop learning (Koch and Lindenthal 2011). The commonalities of this dominant learning type in the policy learning literature is the strategic use of knowledge and experience to achieve one's policy objective without the necessity of reflecting on the input or changing one's underlying beliefs. However, there is more to learning in policymaking than simply learning

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how to play politics better. The next section thus examines the conditions under which learning is transferred to the organizational level and is potentially reflected in the policy outcome as a key contribution of this research.

Conditions for Constructivist Learning

The empirical findings point toward a number of learning conditions that match the key expectations from the Learning in Governance Framework (LGF) presented in chapter 2. Learning can occur in the complex interactions of the individual and organizational levels, which are further influenced by wider developments and major shifts in the sociopolitical landscape. For constructivist learning to occur in the policymaking process, the policymaking conditions need to support reflection on input and a change in perspectives. This can be hindered by several factors, such as defensive avoidance, bargaining tactics, and power politics. It can also be hindered by an organizational culture that does not support reflection and changing perspectives or is not open to changes based on input by the individuals who have learned. Thus, the link between the individual and organizational levels is very important for learning to be transferred into the policy outcome. If there is a disconnect between those two levels, individuals may well have learned, but the organization (and ultimately the policy outcome) do not reflect this change in beliefs, including policy detail beliefs on how a policy instrument should be designed. It is normal, and to a certain extent to be expected, that individuals who are involved in a policymaking process learn in terms of acquiring new knowledge and experience, thus engaging in factual and experiential learning. In some cases, this may be sufficient to result in a policy change, while in others, only constructivist learning in the form of changed deeper, policy design, and policy detail beliefs continues to the organizational level, where it results in a policy proposal that is adopted by the other governmental institutions. However, especially constructivist learning can result in policy change if the modified individual beliefs spill over to the organizational level as key actors considerably influence the policymaking. This points to the central role of leadership by policy entrepreneurs in achieving policy outcomes and facilitating learning processes.

It was important to differentiate in the empirical analysis between preformed deeper beliefs and newly formed policy design beliefs and to control for preexisting beliefs, green or otherwise. Key actors in the CAP and RED case studies maintained their beliefs and subsequently tried to align the policy outcome with their preexisting beliefs. Therefore, the time frame of analysis is important. In a long-term time frame beginning in the 1970s,

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individuals learned and changed their deeper beliefs parallel to the changes of what society regarded as important in the sociopolitical landscape. The overall concern about energy security in the 1970s in the face of shortages had an impact on society and policymakers alike, which resulted in a willingness to search for alternative fuels. The shift toward the public goods model in the CAP also coincided with a strong public concern about food safety and environmental degradation in the 1990s, which also marked the entry of ENGOs. Policymakers reflected on these wider sociopolitical changes and changed their individual beliefs accordingly. The third major instance was the mounting scientific evidence on climate change and its emergence in the sociopolitical landscape between 2006 and 2007 marked by Hurricane Katrina, the Stern Review (Stern 2006) on the economic costs of climate change, *An Inconvenient Truth* (Guggenheim 2006), the publication of the IPCC report (IPCC 2007), and the award of the Nobel Peace Prize to the IPCC and Al Gore for raising awareness of climate change.

These shifts in the sociopolitical landscape also illustrate the importance of windows of opportunity. These were further conditioned by outside factors such as the economic situation. The economy-focused coalition was strengthened as the window of opportunity for climate policy and CPI closed with the economic and Eurozone crises (Rietig 2019a), which subsequently lowered the priority of environmental and climate policies (Bürgin 2015). Nevertheless, key aspects such as the conditionality of 30 percent of farm payments on compliance with greening measures and the dedication of 20 percent of the EU's 2014–2020 budget to cobenefits on climate measures were maintained in the policy outcomes, and thus point to path dependencies of policymaking beyond those windows of opportunity. The global public and political interest in climate change began to increase again in 2015. Large-scale political mobilization and civil society activism (Chan et al. 2019), learning within the UNFCCC (Rietig 2019b), and increased economic competitiveness of renewable energies (Meckling 2017) and supportive political leadership united in a low-carbon economic development narrative that facilitated the Paris Agreement on Climate Change.

As weather extremes provide firsthand evidence of climatic changes around the world and the fifth IPCC report (IPCC 2014) warned of more rapid climate change than initially projected, the Fridays for Future youth movement around Thunberg and other activists pushed climate change back to the top of the political agenda. Numerous cities, and increasingly countries such as the United Kingdom, are declaring climate emergencies to increase their ability to implement ambitious climate policies. In the summer of 2019, the German minister of defense, Ursula von der Leyen,

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was elected by the European Parliament as the new president of the European Commission on the promise of making addressing climate change a key priority. Consequently, the 2006–2007 window of opportunity, which remained open for an unusually long time (Carter and Jacobs 2014), was succeeded by a shorter window of opportunity in 2015 around the Paris Agreement on Climate Change and a more recent one in 2019 around the Fridays for Future youth protests in response to weather extremes in 2018 ranging from wildfires across the United States to droughts in western and central Europe to typhoons and flooding in Asia.

The time frame is linked to a further crucial condition for learning to occur and to be transferred into the policymaking process—and ultimately the policy outcome. This depends on the political feasibility of actors' newly formed policy detail beliefs within the dominant coalition. If these actors encountered a window of opportunity and used it to gather the necessary political support for their policy proposals, the learning was likely to be reflected not only in the policymaking process, but also in the policy outcome. Thus, learning can be regarded as not trivial for the policy outcome, which results in two key findings: constructivist learning in the sense of changes in beliefs should be free of any normative judgment regarding its desirability, and preheld deeper beliefs can also have a strong influence on the policy outcome.

Some of the actors within the economy-focused coalition held preexisting green deeper beliefs, which were formed early in their personal development. These can be based on a childhood in the countryside, and thus intensive exposure to nature and animals, which led these individuals form deeper beliefs on the intrinsic value of preserving the environment. In particular, a large number of key actors in agricultural policy emphasized that they grew up on family-run farms or were farmers themselves, and some of them still maintained their farm on a part-time basis. The deeper beliefs of these individuals could be characterized as attaching great importance to environmental sustainability as the prerequisite to safeguard natural resources for future generations and sustainable farming practices to ensure soil fertility.

The second group formed its deeper beliefs in favor of environmental sustainability in the 1970s, when they participated in environmental and antinuclear movements, contributed to the academic debates surrounding the limits to growth, or participated in the UN World Summit on Sustainable Development. If learning is analyzed within a long-term frame, and these individuals did not fall into the first group, their deeper beliefs most likely changed from a neutral/indecisive point of view toward green beliefs. Their professional career may have led them subsequently into positions that were aligned with these green deeper beliefs (i.e., within the environment-focused

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coalition) in policymaking. If, however, they were working for an organization or governmental department that had other objectives not always cobeneficial for the environment, individuals with green deeper beliefs also ended up in key decision-making positions within these not primarily green organizations. This was partly the case in the greening of the CAP in the reforms during the 2000s, and especially in the CAP and EU budget negotiations on the side of the European Commission in 2014–2020. Individuals in the first and second group, who were already holding deeper beliefs, also aligned their policy design and policy detail beliefs to reflect their deeper beliefs, and thus shaped their policy proposal to reflect a wider consensus in favor of greening—which also coincided with their own beliefs.

The third group included individuals who changed or formed their beliefs based on the evidence on climate change presented to them between 2006 and 2007, especially if they had no prior involvement with environmental or climate policy. Some members of the economy-focused coalition in the RED case study and of the status quo, as well as the moderate reform coalition in the CAP can be regarded as having formed or changed their deeper beliefs following the overall change in the sociopolitical landscape toward concern about climate change. They thus engaged in constructivist learning by reflecting on the evidence on climate change provided to them by the media and the IPCC, and concluding that climate change existed and was a problem (deeper belief), and that something needs to be done about it in the form of policy (policy design belief), with specific ideas about what this policy should or should not look like (policy detail beliefs). In this case, constructivist learning occurred on the individual level as a result of changes in the sociopolitical landscape.

There were enough cobenefits for members of the economic development coalition in the RED case to support climate change objectives, especially as they also matched their other policy design beliefs about energy security and economic development. But when the scientific evidence on the negative climate performance of food-crop-based, first-generation biofuels emerged, the economy-based coalition could not change their policy detail beliefs, as they would have conflicted with their policy design beliefs on energy security and economic development, which emphasized the benefits of first-generation biofuels. This misalignment in beliefs led key members of this coalition to engage in defensive avoidance to protect their policy design and policy detail beliefs.

In the case of greening the CAP, the key actors at the European Commission within the economic development focused coalition already held green deeper beliefs and the policy design belief that they also needed to do something

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about environmental degradation and climate change—while trying to preserve and justify the continued existence of the CAP. The key individual's green deeper beliefs resulted in an intrinsic drive to make Europe's agricultural sector greener via policy instruments that introduced greening mechanisms into the CAP. Consequently, both learning and the content of the policy change were not purely instrumental or in reaction to external pressures, but they coincided with these intrinsic factors in a win-win constellation.

These findings show that constructivist learning of individuals needs to be benchmarked against the deeper beliefs of individuals, not against an externally imposed objective such as a principled priority of environmental protection, climate mitigation, economic development, or social objectives, which is the dominant approach in the literature (e.g., Feindt 2010; Koch and Lindenthal 2011; Nilsson and Eckerberg 2007). Consequently, constructivist learning on the individual level can have an impact on the policy outcome and can be measured based on how well the policy outcome reflects the deeper beliefs of individuals. Another aspect consists of the role that an individual played (whether for pay or not) on the wider organizational level and how well learning on the individual level was transferred to the organizational level, where the policy outcome is negotiated and decided. In that sense, the link between those levels is crucial for connecting learning to a policy outcome, as illustrated by March and Olsen (1975).

Transmission of Learning into the Policymaking Process: The Key Role of Policy Entrepreneurs

The findings indicate a high relevance of leadership by policy entrepreneurs to facilitate or hinder learning. In the CAP reforms, policy entrepreneurs played a key role in getting decisions in favor of CPI adopted by the European Commission. These were actors in high administrative positions who held strong personal convictions in support of environmental objectives and climate mitigation (EC 14; EC 15; EC 16; EC 17; EC 18; EC 21; EC 22; EC 24). In the case of European biofuels policy, a policy entrepreneur was highlighted from a normative environmentalist perspective as an example of how an individual (EC 9; ENGO 1; also discussed in detail by Sharman and Holmes 2010) can push through decisions that are not necessarily beneficial for the environment. Yet the evidence suggests that policy entrepreneurs achieved their outcomes without teaching other actors (Bomberg 2007), and thus persuading them (Risse 2000; Riddervold 2011), but rather due to their sophisticated strategizing and steering in the policy process. In this section, I discuss how the findings match the expectations

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of the empirical literature on learning in the EU, which has so far paid little attention to the role of individuals acting as policy entrepreneurs, as well as their central role in both transferring learning from the individual to the organizational level and bringing about a policy outcome that may be owed to other explanations besides learning.

Policy Entrepreneurs in European Policymaking

Policy entrepreneurs proved to be crucial factors for the transfer of learning from the individual to the organizational level, as well as for achieving a policy outcome. The commissioners and their senior staff were the key actors in the CAP case study. They developed the policy proposals and steered them through the policymaking process, as indicated by several key actors (Pirzio-Biroli 2008; Swinnen 2008b; Swinnen 2015). In the case of the RED, key individuals within the economy-focused coalition emerged as policy entrepreneurs who also guided the policy process toward its outcome (Sharman and Holmes 2010). Numerous actors were involved in the policymaking process, such as experts, lobbyists (businesses, unions, NGOs), civil society, other government departments from the national, state and local level, MEPs and political parties (Bomberg 2007; Stone 2000, 2001; Zito 2009). Some of these actors had well-developed networks and acted as policy entrepreneurs because they were personally convinced that their policy proposal was the right thing to do, and they possessed the necessary expertise and credibility to persuade other actors—or at least the network—to call upon such experts. Here, the central importance of knowledge in policymaking became visible (Dunlop 2009; Radaelli 1995; Zito 2001).

Policy entrepreneurs were crucial for the policy outcome and either supported or hindered learning, also depending on their leadership style. They had the option to support learning on the organizational level by trying to teach the other actors and change their beliefs via arguments (Bomberg 2007). Yet little empirical evidence was found in the case studies to support this expectation. In the CAP, key actors steered the policymaking process using negotiation tactics to "push through" (EC 15) a proposal of which they were convinced that it was the "right thing to do" (EC 24), but there was limited evidence that they actively tried to persuade other actors of their policy proposal. Furthermore, the key policy entrepreneurs did not act as neutral policy brokers, but as members of an advocacy coalition (Sabatier 1998; Tallberg 2004; Warntjen 2008; Weible et al. 2009). Thus, there was also little empirical evidence to conclude on learning brokers. The evidence instead pointed toward the dominance of traditional negotiation and bargaining tactics, as well as a strategic steering of the policy process based on

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the policy entrepreneur's experience with the subtleties of the policymaking process (Braun 2009; Howard 2001; Krause 2003; Pirzio-Biroli 2008).

In particular, the target of mainstreaming climate objectives into the EU 2014–2020 budget put forward by DG Clima, as well as the subsequent adoption of this objective in the EU budget (European Council 2013), could be seen as an instance where policymakers learned based on DG Clima's role as a learning broker (Rietig and Perkins 2018). However, the decision to propose a 20 percent target for CPI in the EU budget was successfully introduced into the European Commission's budget proposal only at the final decision-making stage in the College of Commissioners, partly due to the leadership skills of the European Commissioner for Climate Action Connie Hedegaard and her ability to be very convincing (EC 6; EC 14; EC 15; Rietig and Perkins 2018). This precedent of having a 20 percent mainstreaming objective in the 2014–2020 EU budget could have offered a route toward learning on the level of member states where significantly higher public financial resources are concentrated. However, it resulted in a certain path dependency for the 2021–2027 EU budget, which again contained the target of mainstreaming climate objectives into 30 percent of the EU budget, up from 20 percent (EC 2018; Rietig 2021).

This policy innovation of dedicating a certain share of the EU's budget to achieving cobenefits for climate action may be an example where learning can occur in the next reform cycle after the innovation was initially introduced in the 2012–2013 negotiations. At that time, actors failed to learn, as there was no reflection on the policy innovation that could have triggered learning processes (Rietig and Perkins 2018).

The example of Commissioner Franz Fischler's introduction of stronger greening measures into the CAP (Nedergaard 2008a; Pirzio-Biroli 2008) and the European commissioner for climate action's push for dedicating 20 percent of the EU budget, with the CAP as the largest component, to mainstream climate objectives (Rietig and Perkins 2018) also demonstrated how policy entrepreneurs can embed a new objective into the "institutional machinery" (EC 24). In that specific instance, not much learning occurred among other individuals involved when the policy entrepreneur "simply pushed things through" (EC 15):

> But I think by and large I would not see that much learning because this is a very, how should I call it, this is a machine which works for many, many years and it is always the same. In the Council, you have different ministers but the principle is the same, the way we work with member states. I think all the players know each other extremely well, in this field, in this industry, there is a kind of a family, it is a large family, but it is a family. There are a lot of very strong personal

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> relationships among the players, which also help to find solutions and they can open the talk without being always in a formal negotiations. So that's the reason. I don't think there is necessarily a learning process involved in this; it's more about improving the proposals towards whatever is needed and showing the necessary flexibility to adapt to situations. (EC 24)

This provides a link to the organizational level: It can be regarded as constructivist learning on the organizational level in the medium term if the policy entrepreneur is successful in changing policy design beliefs on the organizational level. In the empirical example, Commissioner Fischler is regarded by the actors involved as the decisive policy entrepreneur who embedded greening and environmental objectives into the CAP. This resulted in a new policy objective, originating from the policy entrepreneur, which will persist even after this individual leaves office.

Thus, a decade later, it appears as if not "that much learning" (EC 24) happened, as the institutional machinery has adapted to the earlier integration of learning via the policy entrepreneur. Once embedded into the organizational level, the course is being continued in a certain path dependency as part of the institutional machinery, or even an additional institutional objective. The individuals involved in the subsequent policy reforms either changed their underlying beliefs or were simply following the path laid out by the policy entrepreneur in one of the earlier policy reform rounds. This can also be observed in the 2018–2019 negotiations for the 2021–2027 EU budget, which reintroduced an increased climate mainstreaming objective of 30 percent, even despite the lack of reflection and subsequently learning in the 2012–2013 negotiations for the 2014–2020 EU budget. Regardless, the change in policy design beliefs within the institution results in a new path dependency and stable policy equilibrium.

Factual and experiential learning can also be used strategically to outsmart other actors in the decision-making process (Koch and Lindenthal 2011; Radaelli 2009). In particular, the European Commission plays a leading (and even a steering) role in the negotiations within the working groups in the European Parliament and the Council of the EU (Braun 2009) that goes beyond its treaty-based role (Craig 2010; Hix 2005; Nugent 2001; Sabathil, Joos, and Kessler 2008) as a neutral observer providing knowledge-based support to the European Parliament and the member states. After the publication of the European Commission's proposal, it plays a de facto steering role that opens windows of opportunity to influence and even steer the decision-making process.

In the drafting and negotiation of the European Emission Trading Scheme, factual and experiential learning was used to serve this exact purpose: to

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push through the legislative proposal (Braun 2009). A small team of policy entrepreneurs within the DG Env of the European Commission achieved this by gaining support from member states and MEPs in favor of a policy proposal. The team of civil servants drafted the policy proposal on the European Emission Trading Scheme with the input of key stakeholders. The team members were very knowledgeable and had learned from the experience shared by stakeholders who had previously implemented this type of market-based policy instrument (Braun 2009, 478). It is, however, also important to note that these individuals, predominantly at DG Env, gained most of their knowledge on emission trading between 1997 and 2003 by inviting experts to share their experiences from emission-trading pilot projects. These activities enabled them to "organise the necessary political majorities among all the relevant stakeholders . . . [whereby] these individuals repeatedly found ways to speed up the policy process, to expand the room for manoeuvre and to create new latitude for other actors" (Braun 2009, 482). The findings in Braun (2009) match the empirical findings of the case studies. Given that only a few key individuals were in charge of developing a policy proposal, thereby gaining deep expertise and taking on an officially consulting role in the subsequent policymaking process on both the CAP and the RED, they became powerful negotiation partners based on their knowledge, and especially a feeling of ownership of the policy proposal they had developed. Their objective was to come forward frequently with a proposal that was as close to the negotiated final deal as possible, thereby taking into account stakeholder concerns earlier in the process rather than later.

At the same time, it is important to keep in mind that both the CPI into energy policy in the form of the RED and the European Emission Trading Scheme were results of the UNFCCC negotiations of the Kyoto Protocol, which took a market-based approach to reducing emissions with the Clean Development Mechanism. The EU accepted the deal of introducing market-based mechanisms with the objective of persuading the United States to sign on to the international treaty. Despite the US withdrawal from the Kyoto Protocol, the EU decided to implement emissions trading following the failure of the European carbon tax (Braun 2009, 472). This example illustrates that both developments in the sociopolitical landscape, which includes wider developments on the global level such as the UNFCCC negotiations, and key policymakers who act in line with their beliefs, had a decisive role in achieving policy change, and that this is not limited to the specific case of CPI but can also be confirmed for single-purpose policies.

Overall, policy entrepreneurs played a central role in steering policy proposals toward their adoption. Learning depended on how those policy

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entrepreneurs acted and whether they tried to persuade other actors by teaching them of the importance of the specific policy proposal, as emphasized by Bomberg (2007), or if they steered the proposal through the policymaking process without "taking the other actors along," but simply "pushing things through" (EC 15) with power politics, political horse-trading, and using their expert knowledge of how they can best influence the political process (Biermann 2002; Perkmann 2007; Roberts and King 1991; Stone 2004).

The case studies illustrated that the latter was especially dominant, based on previous experiential and factual learning of the policy entrepreneurs, and potentially on a previous change in deeper beliefs with a subsequent alignment of policy design and policy detail beliefs. The case studies suggest that policy entrepreneurs make strategic use of their knowledge of political dynamics and the institutional machinery to get their policy proposal adopted rather than engaging in a mutual learning process to persuade and teach the other actors by trying to change their beliefs. The empirical findings indicate a methodological aspect widely neglected in the literature: other than the policy-specific learning discovered by Braun (2009), individuals frequently had their learning experience long before they acquired the ability and opportunity to act as policy entrepreneurs in the specific policy process under analysis. Thus, there is a close link between previous learning and current power politics and political strategizing, which appear as alternative explanations for policy change—although it is based on learning in previous rounds of policymaking and would not necessarily be counted as learning in the case under analysis.

What Have We Learned about Learning in Policymaking?

So how do the empirical findings described here advance our understanding of learning in policymaking? This section discusses how the empirical findings, which can be analyzed using the LGF developed in earlier chapters, improve our understanding of theoretical frameworks on learning in earth system governance. Most learning frameworks have been developed in the US context with US case studies, both in policy learning and in organizational learning (notable exceptions are the contributions made by Dunlop and Radaelli 2013; Radaelli and Dunlop 2013). The EU and earth system governance literature began to integrate learning conceptualizations relatively late, mostly out of engagement with the policy transfer literature (Benson and Jordan 2011; James and Lodge 2003) and the separate stream of diffusion theories, as well as the new governance debates (Héritier and Lehmkuhl 2008; Schout, Jordan, and Twena 2010; Trubek and Mosher 2003).

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Uniqueness of the European Union—Does It Matter for Learning?

The EU-focused literature predominantly applied US-based theoretical frameworks on learning. These are mostly a synthesis of the concepts of single- and double-loop learning (Argyris and Schön 1978; Argyris 1976) labeled as organizational learning (Huber 1991), Sabatier's policy-oriented learning (1988), and May's (1992) political learning, and to a lesser extent Hall's (1993) first-, second-, and third-order changes labeled social learning by Bennett and Howlett's (1992) influential review article. The most EU-specific learning type that does not explicitly originate from a US-based learning theory is instrumental learning, in terms of learning about the content of new policy instruments used by Nilsson (2005), Radaelli (2009), and Schout (2009).

This learning about the content and function of more recently used policy instruments is a very common aspect of learning, however, which we would expect to find in most policymaking processes oriented toward an efficient provision of public goods. Most of the literature that examines learning at the example of EU case studies draws on US-based conceptualizations of learning and did not develop an EU-specific framework to learning. Comparative work found that learning in the EU is similar in its mechanisms to learning in the US. Thus, there are few relevant differences in learning research. Empirical comparative studies of learning in the EU and North America suggest that the EU is also moving toward an adversarial policymaking system and that policy entrepreneurs play a role in learning (Montpetit 2009):

> Policy actors are inclined to learn, whether they belong to the EU or not. The results of the three tests presented in this article call for a significant revision of the theories suggesting that governance in the EU is particularly conducive to policy learning. In fact, policy development in nation-states, including North American states, features policy learning in much the same way as in the institutions of the EU. (Montpetit 2009, 1199)

Do we need an EU-specific framework to identify learning? Given that the LGF presented here is based on the wider earth system governance and public policy literature, there is little need for an EU-specific framework. On the contrary, the "So what?" question points toward the advantage of being able to apply LGF to any policymaking process than to impose unnecessary geographical limitations on it.

Addressing Gaps in the Policy Learning Literature

A key finding is that the existing literature rarely explicitly connected the individual level of learning with the organizational level or the sociopolitical

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landscape. Contributions usually implicitly limit their theory development and empirical analysis to one level, with most contributions focusing on the organizational level (e.g., Gerlak and Heikkila 2011; Heikkila and Gerlak 2013). Mainly the classics, such as the contributions made by Argyris and Schön in the 1970s (Argyris 1976; Argyris and Schön 1978), as well as the model developed by March and Olsen (1975), illustrate the link between learning on the individual level with the organizational level—that is, when learning is transmitted from the individual policymaker to the governmental organization and thereby enters the sphere of policymaking with the opportunity of a different policy outcome from the status quo. This link, however, has rarely been taken up and been systematically integrated into theoretical frameworks of policy learning.

The second key finding, which is closely related to the first, is the role of changing beliefs in policymaking. This also relates to the relevance of science and knowledge in policymaking (Biermann 2005; Radaelli 1995; Young 2008), as well as the importance of institutional dynamics (Young 2010). Most of the literature focused on what can be regarded as normal learning that can be expected in any governance process and labeled in the LGF as factual learning and experiential learning on the organizational level (e.g., Bernstein and Cashore 2012; Dunlop 2010; Gerlak and Heikkila 2011; Heikkila and Gerlak 2013; Koch and Lindenthal 2011; Radaelli 2009; Schout 2009). At the same time, there is a rich body of literature focusing on beliefs and power in the regime-theoretical and constructivist tradition (e.g., Keohane and Nye 1987; Haas 2000, 2004; Levy 1994; Nye 1987; Wendt 1992).

The so-called normal learning literature includes the empirical contributions that link to Bennett and Howlett (1992) and May (1992) and try to conceptualize or empirically apply learning theories labeled instrumental learning, policy learning, political learning, government learning, governance learning, and social learning. Social learning (Heclo 1974) emphasizes the importance of changing beliefs and values. Yet there are very different beliefs of varying stability, and only examining shifting beliefs results in low accuracy. The public policy literature based on Sabatier (1988) highlights different types of beliefs and provides theoretical foundations that served as an inspiration for the aspects on changing beliefs introduced in the LGF. Deep core beliefs are fundamental worldviews. Deeper beliefs are also very stable, but they can form and/or change over longer time frames. Frequently, individuals or groups use all kinds of tactics to protect their deeper beliefs and to ideally align their policy design beliefs and policy detail beliefs. Sabatier (1988) describes this kind of learning as problem-based learning, which has been found to occur frequently during the policymaking process and was

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labeled political learning by other contributions (e.g., May 1992; Radaelli 2009; Schout 2009; Zito and Schout 2009).

Sabatier's distinction of beliefs has the advantage of referring to an objective (i.e., the belief that a policy *should* use certain instruments or serve certain objectives) and thus allowing an analysis of the process and the outcome. On the other hand, Hall (1993) refers to the outcome, falling short of providing for a key interim step of learning. Thus, the second specific contribution is the consolidation of the literature into the further development of constructivist learning that asks about changes in deeper, policy design, and/or policy detail beliefs on both the individual and organizational levels and shifting wider beliefs in the sociopolitical landscape, which in turn can be a driver for learning.

The third novelty is to link the importance of leadership by policy entrepreneurs for policymaking with learning theories. The specific learning literature underestimates the importance of individuals who take on leading roles as policy entrepreneurs (Kingdon 1995), policy brokers (who play a central role according to Sabatier 1988; Weible et al. 2009; Weible and Sabatier 2009), or policy middlemen (Heclo 1974) in steering the policy process and bringing about specific policy outcomes. These policy entrepreneurs are not only teachers, as suggested by Bomberg (2007), but they also can bring about an outcome without teaching the other actors and bothering to convince them by changing their policy design or policy detail beliefs.

The literature on policy diffusion (Volden, Ting, and Carpenter 2008) provides the key link to introducing policy entrepreneurs as conditioning factors for learning and an emerging policy outcome. In particular, contributions by Page (2003), Stone (2004), and Zito (2001) illustrate how relevant individuals and small epistemic communities are in policy transfer. The key determinant is to ask the counterfactual question: would the policy outcome be different without learning? Often, learning played a facilitating role but did not have a divisive impact. However, the outcome would have been different if it had not been for a policy entrepreneur whose dedication, knowledge, and clever use of windows of opportunity resulted in a change that set a policy in a new direction. Fischler's involvement in the 2003 CAP reform is a key example (Pirzio-Biroli 2008).

Most interviewees at the European Commission emphasized the collective policy entrepreneurship, a key link between the individual and the organizational levels that facilitates a policy outcome. This explanation for the policy outcome, which to a certain extent may include learning on the individual level depending on when the individual learned and formed underlying beliefs, has also been widely neglected in the policy learning

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literature. Following an interview that centered on the question of learning and policy entrepreneurs, a high-level key actor at the European Commission and individual policy entrepreneur at the heart of European climate policy humbly concluded:

> Well, these are exciting stories now, even for me. But of course, you know, it's a process, its not a person, you must remember that, and so there isn't an instigator of anything, it's got to be done with the blessing of your hierarchy, it's got to be done with the support of people in the DG working with you. (EC 22)

It is this combination of determination, shared deeper beliefs, and policy design beliefs toward deeper integration, sustainable development, and serving the European public (together with the experience of maneuvering the political process in a team effort) that makes the European Commission a special collective policy entrepreneur. Along with the diffuse power distribution among the European institutions similar to the US federal system (Ackrill et al. 2013; Zahariadis 2007), the European Commission and its directorate generals/cabinets sit at the center of the storm of policymaking and not only are key actors and collective policy entrepreneurs, but also have the potential to be teachers given their vast knowledge and expertise. In particular, this combination of experience, expertise, and factual knowledge makes the European Commission a powerful political body at the intersection of moderating and steering, given the ability to outsmart the European Parliament with fewer resources and some of the smaller EU member states.

In particular, the role of the European Commission raises the question of to what extent the findings on learning are unique for the EU. When zooming out of the EU as a unique governance system—which, viewed with sufficient detail, every state, federal system, or intergovernmental organization is as well—this role of the European Commission can be interpreted as an aspect of the wider organizational culture within the EU. This covers both the specific legal role of the European Commission and its policy entrepreneurial behavior, which goes beyond its formal role in the treaties (Craig 2010) as a political actor that furthers their institutional interests of deepening European integration. In that sense, the role of a strong executive that steers policy proposals through the decision-making process and has a considerable impact on the policy outcome can be either a facilitating or a hindering factor for learning, which ultimately depends on the organizational culture. The LGF allows to control for the activities of policy entrepreneurs in influencing the policy outcome and to analyze their specific role in facilitating or hindering learning as a key variable.

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Key Findings on Learning across Cases

This chapter discussed how the empirical findings from the case studies match with the expectations from the academic literature and determined what key factors matter for learning to occur, for identifying which type of learning it is and for understanding how learning affects the policymaking process, as well as the policy outcome. The case studies confirmed a number of expectations from the academic literature regarding the occurrence of individual learning, especially in the area of factual and experiential learning, that is evident in the policymaking process. However, as emphasized in the Learning in Governance Framework, it is important to raise the bar for what can be regarded as learning in policymaking. Thus, factual and experiential learning can be labeled as normal learning, as policymakers always digest new information and accumulate experience (Rietig and Perkins 2018).

The specificity of this research involves the European Commission as a particular collective policy entrepreneur that resides in a particular position of power based on their entrepreneurial spirit, shared deeper beliefs of their civil servants toward deeper economic integration and sustainable development in the area of CPI, as well as its unique wealth of knowledge and experience paired with a political objective. This finding influences learning in the EU, as it is particularly dependent on the actions of the European Commission—that is, whether key actors choose to teach the other actors and persuade them, whether they choose to use their advantage and acumen to maneuver their policy proposal through the political decision-making process using conventional negotiation tactics, or whether they choose not to act as policy entrepreneurs for various reasons. Hooghe (2012, 88) concluded on this uniquely powerful role of the European Commission as "the world's most powerful international executive."

However, we would have expected a connection between constructivist learning and the policy outcome. A key finding is that the temporal aspect of the analysis matters strongly for measuring so that the preexisting beliefs of policymakers must be taken into account. A further important determinant is the kind of beliefs that any member of a coalition holds. If policymakers hold deeper, policy design, and policy detail beliefs that are shared by their coalition, then they would be expected to have changed their beliefs and engaged in constructivist learning if they hold different beliefs at the end of the policy process. As the case of the CAP illustrated, however, it is possible that key individuals, who also act as policy entrepreneurs, hold deeper beliefs that are aligned with the opposing coalition that aims to integrate their objectives and thereby deeper beliefs into the

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first coalition's policy area. If the key actors' beliefs and the climate policy integrating coalition's objectives match, the policy process is likely to be less controversial. The likelihood for a policy outcome that is aligned with the key actors' beliefs is also higher.

How well the beliefs of key actors are aligned with the proposed policy also has an effect on the level of conflict in the policy process and the policy outcome. Here, a key distinction between policy integration and single-purpose policies becomes evident: in single-purpose policies, the beliefs of policymakers at the European Commission are aligned with the policy proposal. The reason is that the climate policy directorate (i.e., DG Clima) was in charge of a climate policy instrument, which is its sole responsibility. It thus remained in the driver's seat (i.e., in charge of the policymaking proposal and the subsequent consulting role in the European Parliament and the Council). The level of conflict remained low in the greening of the CAP, as the key actors at DG Agri already held green beliefs that did not contradict their other policy beliefs of rural development and maintaining the CAP. This positive alignment of political objectives and beliefs enabled these individuals to play leading roles and act as policy entrepreneurs promoting an outcome they regarded as desirable.

The biofuels case within the RED illustrated what happens when the beliefs of the key actors (DG Energy) conflict with the CPI objective. The policy outcome of the RED (EU 2009a) is aligned with the beliefs of the key individual policy entrepreneurs that were in the driver's seat with the objective of maximizing energy security, economic development, and climate mitigation. After the new evidence regarding the mixed performance of some biofuels emerged, the economy-focused coalition and its policy entrepreneurs regarded the evidence as insufficient and lacking a scientific consensus to grant them principled priority over the other two objectives of energy security and especially rural economic development, which were still fulfilled. Thus the policy outcome is in line with the beliefs of the dominant policymaking coalition. The changes to the RED via the FQD (EU 2009b) can be traced back to be in line with the beliefs of the environment-focused coalition, which was in charge of the FQD. It was able to influence the RED via the links between these directives.

These cases illustrate the additional challenges that are inherent in the approach of integrating climate objectives into other policy areas. So long as the climate objectives match the beliefs of the policymakers in charge of the policy proposal—whether it be due to individual serendipitous alignment or cobenefits of the respective policy area with climate mitigation—CPI is more likely to succeed. If, however, climate mitigation does not match (or only

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partly matches) the beliefs of the responsible policymakers, it is more difficult for environment-focused coalitions to influence the policymaking process, as the policy entrepreneurial decision-making structures in European policymaking are likely to work against the CPI objectives, as the biofuels case illustrates (Rietig 2018b, 2019a).

CPI requires a higher degree of coordination from all actors involved than a focus on single-objective policies such as emissions trading (Ellerman and Buchner 2007). Yet the higher level of coordination also results in more communication among the key actors. Thus, we would have expected more arguing and persuasion in the policymaking process (Risse 2000; Risse and Kleine 2010) and more changes in policy design and policy detail beliefs. However, actors rarely were persuaded by better arguments, and consensus was

Table 7.2
Key findings on learning across cases

1. Policy entrepreneurs play a central role in steering policy proposals toward their adoption. Learning on the organizational level depends on how those policy entrepreneurs act and whether they try to persuade other actors by teaching them of the importance of the specific policy proposal.
2. Changes in the sociopolitical landscape can be less interpreted as learning themselves but rather as drivers for learning.
3. Preexisting knowledge and experience determine how steep the learning curve is on the individual and organizational levels.
4. Preheld deeper beliefs can also have a strong result on the policy outcome.
5. Constructivist learning of individuals needs to be benchmarked against the deeper beliefs of individuals, not against an externally imposed objective.
6. Highly contested scientific knowledge can intensify the individual factual learning process, as individuals need to find scientific studies to back up and actively defend their positions.
7. Individuals can go as far as to engage in factual and experiential learning, as well as political maneuvering and defensive avoidance, to keep from having to change deeper and policy design beliefs.
8. The driver in the sociopolitical landscape does not necessarily lead to constructivist learning, but instead to factual and experiential learning aimed at instrumentalizing the policymaking process to achieve predetermined objectives that appear to be constructivist learning.
9. An organizational culture that does not support reflection and changing perspectives or is not open to changes based on the input by individuals who have learned can hinder constructivist learning on the individual level, and especially the organizational level.
10. Factual and experiential learning can be used strategically to outsmart other actors in the decision-making process.

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rarely reached—where there was agreement, this was due to shared preexisting beliefs across coalitions. In the biofuels case, for instance, a controversy emerged as the policy detail beliefs became misaligned. Instead of arriving at a common position during the process of negotiating and discussing the findings, policy brokers had to resolve the situation with a compromise solution. This points toward conventional theories of the policymaking process that emphasize policy brokers (Sabatier 1988; Sabatier 1998), policy middlemen (Heclo 1974) and policy entrepreneurs (Kingdon 1995) as key mediators in bringing about a policy outcome, and thus toward the relevance of taking other explanations into account when examining the influence of learning on policy outcomes. Table 7.2 summarizes the key findings, which should be tested across other empirical cases, jurisdictions, and governance levels within earth system governance and beyond to arrive at more generalizable findings on learning.

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8 Conclusions on Learning in Governance

This book made three distinct contributions to the earth system governance and public policy literature. The first contribution is to clarify what learning means: what types and categories of learning are we referring to when talking about learning? The second contribution is a framework of how we can identify different learning types—namely, the LGF. Finally, the empirical analyses of learning in European CPI in the areas of agricultural, energy, and transport policy show that learning does occur in policymaking and is interdependent with leadership by policy entrepreneurs. This fact points toward the question of when learning matters in achieving a policy outcome (i.e., is the policy different because learning occurred, or did we arrive at a policy outcome despite learning)? Was learning trivial for the outcome, because it would have materialized anyway due to the dominance of other explanations than learning?

What Role Does Learning Play in Earth System Governance?

Which type of learning occurs on the individual and organizational levels depends on the influence of the sociopolitical landscape and the preexisting beliefs of policy entrepreneurs. The key factors that determine which type of learning emerges in the policymaking context are the previous expertise and knowledge of a decision-maker, the culture of information exchange within the organization, institutional capacity, objectives embedded in the institution, and political interests. Experts involved in developing a policy proposal reflect on information presented to them by external experts and stakeholders. In many cases, however, they are already familiar with the information. By the same token, most experts involved in CPI hold deeper beliefs favoring environmental protection and increasing climate action, which did not change by being involved in the policies being examined.

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Yet it is important to include the temporal factor and ask whether these deeper beliefs preexisted or whether they were formed in the 1970s or 2000s, when environmental and energy challenges resulted in shifting perspectives in the sociopolitical landscape. Renewable energy emerged as an energy security objective after the 1970s oil crises and was reframed in the late 1990s and 2000s as a core measure to mitigate climate change. CPI in the CAP is a further development from greening the CAP through the MacSharry (1992) and Fischler (2002–2003) reforms to increase the legitimacy of the subsidies paid to farmers (Feindt 2010; Swinnen 2008a). Its justification was reframed as public money for public goods narrative, of which climate action and environmental protection were the most significant.

The empirical findings indicate that some learning occurred in all cases, especially factual and experiential learning through reflection on new scientific evidence and involvement in policymaking. A few key policy entrepreneurs embedded the greening aspects into the institutional machinery. However, constructivist learning among individuals occurred only as a response to changes in the sociopolitical landscape over the long term, and less via being persuaded by policy entrepreneurs.

Policy entrepreneurs—who learned beforehand—played a crucial role in the negotiation process for the success of the policy proposal, as they had the potential to facilitate learning among other actors. Across cases, policy entrepreneurs were crucial for the success of the policy proposal; however, they used conventional negotiation tactics and strategies. The findings regarding changes in the sociopolitical landscape indicate that learning is a long-term process over several years, even decades, as repeating common sense arguments had a major impact on policy change in both cases. Moving on from Radaelli's (2009) observation that a ten-year time frame is appropriate, one central finding is that learning frequently reaches back further over decades and can resurface twenty, thirty, or forty years later. One major finding on the organizational level is that learning can be confused with the technicalities of policymaking in the EU in general, but especially with the institutional machinery of the European Commission (EC 24). It is crucial to separate learning from bargaining in the negotiations that accompany policymaking in the EU, and from lobbying by the various stakeholders involved (Broscheid and Coen 2007; Klüver 2013; Panke 2012). Decision-makers can learn on the individual level by reflecting on new information and being involved in the process, which can even result in changed beliefs or values regarding the policy. This is frequently not transferred to the organizational level due to the political interests of member states and powerful vested interests.

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In conclusion, learning does occur in policymaking. However, it is crucial to separate so-called normal learning in the form of factual and experiential learning, which can be reasonably expected from every individual involved in policymaking as additional information and experience, from constructivist learning, which requires more than a reflection on the input and a resulting increase in knowledge or experience. Furthermore, it requires individuals to change their underlying beliefs. Only if individuals change their beliefs can we talk about learning that goes beyond normal learning. Previous studies rarely explicitly accounted for preexisting beliefs or established a baseline from which knowledge and experience increased or beliefs changed. We can mischaracterize learning easily if the time span, preexisting knowledge, experience, and beliefs are not benchmarked. It is important to take other explanations for learning into account and to include those in the analysis.

How Can We Identify Learning in Policymaking?

Identifying learning is strongly based on what is being regarded as learning. A review of various definitions of learning (e.g., Argyris and Schön 1978; Kim 1993; May 1992; Sommerer 2011; Zito and Schout 2009) identified elements common to most learning conceptualizations. The following definition, also presented in chapter 2, consolidated the diverse understanding of learning and provided an overall conceptual basis for this analysis. For learning to occur, the following must take place:

> (1) a *reflection and judgment* based on an input, experience or detection of error, which leads the individual to select a different view on (2) how things happen, i.e., the acquisition of knowledge or learning facts and (3) what course of action to take, i.e., the reflection on individual or collective experience or advice from others on such previous experiences. (Rietig and Perkins 2018, 491)

The empirical analysis process-traced the development of two best-case examples. These included the RED adopted in 2009 and the 2014–2020 CAP proposal, with its components on mainstreaming climate action and increasing greening aspects. Learning in these policies was process-traced (George and Bennett 2005; Tansey 2007), predominantly via in-depth, elite interviews of the policymakers directly involved in the development, drafting, and negotiation of the policies and supplemented with document analysis. This research was based on seventy-four interviews with sixty-six key decision-makers at the European Commission (DG/Cabinet Agri, DG/Cabinet Energy, DG Env, and DG Clima), in the European Parliament and the

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Council of the EU (EU member states), and nonnational actors. To identify learning using the LGF, one needs to determine whether communication among the individuals occurred, whether each individual received information such as scientific studies, and whether the individual reflected on the information and as a consequence experienced an increase in knowledge, added practical experience connected to a specific policy action to their base of experience, and/or changed their underlying beliefs. This process-tracing approach has the advantage that it is well established and accepted in the public policy and governance literature (Rohlfing 2012), as most empirical studies on learning followed a similar interview-based approach (Dunlop 2010; Eising 2002; Farrell 2009; Koch and Lindenthal 2011; Radaelli 2009).

Under What Conditions Does Learning Occur?

Learning occurs in the complex interactions between the individual and organizational levels, which are further influenced by wider developments and major shifts in the sociopolitical landscape. For learning to occur in the policymaking process, the policymaking conditions need to support reflection on input and a change in perspective. This can be hindered by several factors, such as defensive avoidance, bargaining tactics, and power politics. It can also be hindered by an organizational culture that does not support reflection and changing perspective or is not open to changes. Thus, the link between the individual and organizational levels is very important for learning to be transferred into the policy outcome. If there is a disconnect between those two levels, individuals may well have learned, but the organization (and ultimately the policy outcome) do not reflect learning.

It is important to distinguish between preformed deeper beliefs and newly formed beliefs and to control for preexisting beliefs, green or otherwise. Key actors in the CAP and the RED case studies maintained their preexisting beliefs and subsequently tried to align the policy outcome with these beliefs. Therefore, the time frame of the analysis is important. Shifts in the sociopolitical landscape also illustrate the importance of windows of opportunity. These were further conditioned by outside factors such as the economic situation. Many interviewees emphasized that an important window of opportunity for climate policy and CPI closed with the economic and Eurozone crises in 2011–2012 as the EU member states were preoccupied with more immediate economic concerns. Nevertheless, key aspects such as the conditionality of 30 percent of farm payments on compliance

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with greening measures and the dedication of 20 percent of the EU's 2014–2020 budget to cobenefits on climate measures were maintained and thus point to the influence of actors and path dependencies of policymaking beyond those windows of opportunity.

Additional windows of opportunity opened in 2015 ahead of the Paris Agreement on Climate Change and the adoption of the Sustainable Development Goals, as well as in 2019, when public pressure through the Fridays for Future youth protests and weather extremes pushed climate change back to the top of the political agenda. Whether learning is transferred to the policymaking process, and ultimately to the policy outcome, depends on the political feasibility of actors' new beliefs within the dominant coalition. If these actors use a window of opportunity to gather the necessary political support for their policy proposal, the learning is likely to be reflected not only in the policymaking process, but also in the policy outcome. However, this also illustrates that constructivist learning should be free of any normative judgment regarding its desirability and that preheld deeper beliefs could have a strong influence on the policy outcome. As a consequence, constructivist learning of individuals needs to be benchmarked against the deeper beliefs of individuals, not against externally imposed objectives. Constructivist learning on the individual level can have an impact on the policy outcome and can be identified based on how well the policy outcome reflects the individual's and the organization's beliefs.

Policy Implications

A number of policy implications emerge from the empirical findings. There is a danger that these findings on learning could be misinterpreted as a lack of learning in European policymaking or earth system governance in general. In fact, one policy-relevant key lesson is that much learning is happening in places where we might not expect it, but learning is also not always as relevant in arriving at a policy outcome, as some of the literature or a general tendency to praise the importance of mutual learning may suggest. However, learning can speed up the policymaking process by reducing the number of incremental reform steps necessary to arrive at a policy outcome that does not immediately reform the policy and withdraw central outcomes. Especially the reliability of policy outcomes is a major concern to industry, business, and the financial sector providing necessary investments in renewable energies as the likelihood of changing economic incentives and regulatory regimes means high uncertainty and financial risk to them. Thus, it would be desirable to arrive at a policy outcome that

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provides a certain stability, with low likelihood of major changes within a short time frame (Rietig and Laing 2017).

In particular, the biofuels component of the RED introduced uncertainty for actors in the biofuels industry, who planned their investments and business operations based on the expectation of a 10 percent target of renewable energy in transport that includes first-generation biofuels from food crops (Dunlop 2010; Sharman and Holmes 2010). The expectations generated from the 2009 RED made a subsequent reform movement toward discouraging first-generation biofuels more difficult, as the original directive created a considerable lobby of biofuel producers who have a vested interest in maintaining the current policy regime. Here, the policy reform meant significant economic risk and potential loss to their investments, which were based on expectations of policy stability.

This also explains the outcome of the reform to the RED in 2015 on indirect land use changes, which limited the ability of countries to include first-generation biofuels in their count of their individual targets for renewable energy in transport to the 2015 level of 7 percent (the European Commission proposed a 5 percent limit, as this was the share at the time), protecting existing investment, while requiring the additional 3 percent to be based on second-generation, waste-based biofuels and other renewable energy in transport, such as electric cars (EU 2015). The 2018 recast of the RED (EU 2018) and the subsequent delegated act on sustainability criteria and indirect land use changes (EC 2019) sent a signal to industry that existing investments in first-generation biofuels would be protected, while also indicating that future expansion of food-crop-based biofuels should be discouraged by EU member states, as they do not contribute to CPI and are increasingly regarded as any other fossil fuel (EC 29; EC 30).

The weak reform that took place ten years after the original RED was adopted highlights how missed opportunities created political and economic path dependencies and lock-in effects that are difficult to reverse, given the increasingly strong vested interests in maintaining the status quo. Thus, learning can facilitate a policy outcome that reduces the likelihood of frequent, incremental reforms if a policy outcome that satisfies the majority of key actors is achieved in the first instance. In the case of the RED, this could have been achieved by more strongly taking into account the emerging scientific evidence, or at least the uncertainty regarding the mixed climate-mitigation capabilities of first-generation biofuels during the policymaking process via adhering to the precautionary principle.

The key issue in the RED was that sufficient scientific evidence on the mixed performance of biofuels became available only after the heads of

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state decided on the target of 10 percent renewable energy in transport by 2020, which, given technological limitations, became a de facto 10 percent target of first-generation biofuels (Sharman and Holmes 2010). A policy implication resulting from the biofuels case would be to create mechanisms that allowed key actors to back up when they cornered themselves in so-called one-way streets—that is, to admit that they acted without having considered all information or that the situation changed following the formation of significant scientific doubts, so that in light of new scientific evidence or experience, a change of course was acceptable. This would allow them to save face without negative consequences for their careers.

Two factors are decisive here: the institutional culture and arriving at a learning organization (Coopey 1995; Easterby-Smith and Lyles 2005), which should not be confused with organizational learning (Easterby-Smith 1997; Lyles 1985). The organizational culture is a key determinant, as all actors and their actions are embedded in the organizational culture and judged against this norm. While in the Anglo-American culture, failure of entrepreneurs at their first business and subsequent learning from failure are regarded as constituting a badge of honor of sorts, Asian (and, to a large extent, continental European) cultures regard admitting to an error as a loss of face, with subsequent loss of reputation and credibility. They strive not to repeat such mistakes in the future. This organizational culture is not set in stone, however; rather it is lived every day (Easterby-Smith and Lyles 2005). In addition, it can be changed if key individuals begin to embrace a culture of reflection and learning from mistakes in a sense of lessons learned or lesson drawing (Rose 1991, 1993). This could happen via debriefings and nonjudgmental reflections on the policymaking process instead of immediately moving on to the next project, as suggested by a key actor in the biofuels case study (EC 9).

This is where the learning organization could be a useful model. The case studies examined here illustrated that individuals engage in learning that is not trivial as they reflect on their policymaking experience and come to change their willingness to do things differently in the future. This adds up to an institutional memory of lessons learned from what the organizational culture widely regards as mistakes (Easterby-Smith and Lyles 2005). If, however, the individuals involved move on to other positions after a few years, either in other directorate generals, in their member states, or when they retire, this institutional memory is lost. Currently, information is rarely systematically collected or stored by individuals involved in policymaking so that they could easily pass it on to their successors. This could be achieved via debriefings that enter experiences of previous policymaking into a database. This way, it is likely that mistakes that happened in the past

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are not repeated as the origin of the incident is recorded and it is no longer unclear to the successors why and how the incident occurred. Currently, there is frequently not enough knowledge to reflect on how the situation was handled in the past and why actions led to the known result. Therefore, it would greatly facilitate learning in the European Commission and other organizations involved in policymaking, as well as improve accountability, if a feedback and debriefing loop were introduced at the end of a policymaking initiative. This could record and encourage reflection on the experiences, how scientific input was handled, and who had decisive influence in shaping the outcome and the rationales behind this. At the same time, individuals in leadership positions need to actively support an atmosphere of collegiality and openness that is nonjudgmental and focused on improving the policymaking process in the future, instead of punishing individuals for their actions in the past.

Learning also has a normative aspect: the use of the institutional machinery to arrive at the biofuel component of the RED could be labeled "bad" learning, as it is opposed to the environmental coalition's beliefs, but whether this is actually bad depends on the value judgments of the actors affected by the policy. In any policymaking process, there are winners, such as farmers, large agri-business, and the biofuels industry, as well as losers, such as environmentalists and small-scale/organic farmers. Each group has a different cost-benefit calculation and value system to judge whether the policy is good or bad for them and their key interests.

The findings on policy entrepreneurs' power and lack of learning point toward a seemingly democratic and accountability deficit in the European Commission. However, some of the research results presented here should not be interpreted as generalizable illustrations of a democratic deficit in the European Commission. It does have large powers based on its particular institutional role and knowledge base, but this type of power is also necessary to design policies that serve the public good with a longer time horizon than the next election or currently popular demands.

A total of 99.5 percent of the cases in policymaking benefit from the medium- to long-term horizon and political neutrality of policy officers and civil servants at the European Commission and their ability to act as policy entrepreneurs (EC 12). The biofuels case study, however, represents the remainder, where the ongoing disagreements between actor coalitions result in the overall conclusion that there is a democratic deficit in the EU due to its closed-door decision-making and the large power of policy entrepreneurs, who were very persuasive to their hierarchy and held a negotiation advantage based on their expert knowledge. Thus, it is necessary to have checks

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and balances that hinder civil servants from playing defining roles that may lead to unintended consequences and to allow for correctional mechanisms in the case of defensive avoidance.

Implications for Theory and Further Research

The LGF contributes to the literature by clarifying the role of learning in the policymaking process. Overall, the facilitating conditions for learning are the following:

- The existence of policy entrepreneurs in leadership roles who try to educate the other actors and convince them of the soundness of their position
- Windows of opportunities due to a favorable public mood
- Demand for a policy outcome based on policymakers' perceptions of shifts in the sociopolitical landscape
- Shared deeper, policy design, and policy detail beliefs across coalitions
- An institutional machinery that encourages individuals to reflect on their experiences and critically evaluate knowledge-based input

The likelihood of a policy outcome increases if key individuals are convinced that a policy objective is the right thing to do; if they are in powerful positions or capable of influencing powerful actors; if they actively engage in the policymaking process by strategically putting together coalitions with decision-making powers; and if they possess the necessary knowledge to play a leadership role based on their expertise (Owens 2010, 2012). However, constructivist learning neither always occurs nor needs to occur. If policy entrepreneurs were also to take on the role of teachers and convince other actors of their policy objectives (Bomberg 2007) instead of using strategies and power politics to realize their political objectives (Kingdon 1995; Moravcsik 1993; Sabatier and Jenkins-Smith 1993), wider learning on the organizational level could occur as more actors change their beliefs instead of following orders from these policy entrepreneurs.

A key question for further research is the role of the European Commission as a policy entrepreneur qua treaty. In the Treaty of Lisbon (Craig 2010) and previous European treaties, the European Commission plays a central role due to its privilege of proposing legislation. Yet empirical findings in European policymaking indicate that the Commission can be regarded as a political actor in its own right, with its own political objectives (Braun 2009; Krause 2003; Laffan 1997). Furthermore, it can hardly be seen as a

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single unitary actor, but rather as multiple actors in the various directorate generals and cabinets of the European commissioners (Koch and Lindenthal 2011) where bureaucrats find opportunity structures to take on the roles of individual policy entrepreneurs.

In combination with the finding that the learning of policymakers in the EU and in the US is fairly similar (Montpetit 2009), the question emerges as to the extent that learning in the European Commission and between the European institutions remains a special, unique case, and whether there are wider lessons for intergovernmental institutions or national administrations. In this sense, the especially powerful role of the European Commission can be regarded as a feature of the EU's particular organizational culture, which also includes its constitutional foundations. To answer the emerging questions about the extent that the organizational culture matters, and the extent that these findings on learning are generalizable for agency (Betsill, Benney, and Gerlak 2020) beyond earth system governance in the EU with regard to climate change, comparative case studies across other areas of earth system governance and polycentric governance would be useful, such as in natural resource and urban governance (Berardo and Lubell 2016; Carlisle and Gruby 2019; Hendrigan 2020; Schröder 2018; Thiel, Blomquist, and Garrick 2019). It would also be interesting to explore how learning matters in networked, hybrid and private transnational governance in the absence of a strong policy entrepreneurial actor with policymaking powers such as the European Commission (Bloomfield 2018; Park and Kramarz 2019; Partzsch 2020). The case of the European Commission is particularly useful, as it provides a bridge within multilevel and polycentric governance between policymaking in a national and supranational context with federal elements (van Zeben and Bobic 2019) and the role of secretariats of international organizations and international bureaucracies more widely.

The other question that remains is whether the findings are specific to the area of CPI, and I would argue that they are not. CPI is a fairly wide area; it theoretically includes all policy fields that are not primarily targeted at reducing greenhouse gas emissions but whose activities contribute to climate change or will be affected by its consequences. However, comparative studies of policy areas within the EU would be helpful to gain a better understanding of the specificity of these findings. If CPI is seen as inherent learning process (Nilsson 2005), there should be less learning in other policy areas. The conflict in the biofuels case study, however, suggests that CPI is a more difficult terrain than single-purpose policies due to competing competencies and possibly conflicting policy objectives of short-term

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economic growth and long-term sustainability. This makes it a field of crucial importance to addressing climate change and strengthening long-term sustainability. However, it also requires key actors that are willing to teach the other actors and invest their political capital:

> We did extremely well. But it was the high point. I think 2011 was an extremely good year for mainstreaming in the Commission. But I also used a lot of political capital getting it. And I am now the most unpopular guy in Brussels. . . . Because I am interfering with other people's portfolios, telling them how to do their job. People don't like that. So it's difficult. But I can survive. (EC 15)

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Appendix 1: Codebook for Data Analysis

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Key Concepts and Aspects of Learning

Code	Definition	Inclusion Criteria	Exclusion Criteria	Examples	Corresponds to Learning Type
Receive information	Be provided with input in terms of additional information, awareness of this specific knowledge, received in written or spoken form	Reference to being provided with policy relevant information	Not be provided with information; relying on own knowledge base	"We were given studies by stakeholders"; "Someone/experts pointed towards evidence for . . ."	Prerequisite for any learning
Reflection	Think about the input, actively engage with it and critically examine its relevance/value	Engage with information and think about it	Receive information without further engaging with it/ thinking about it	"I thought about it"; "It came to my attention"; "I looked into the issue"	Prerequisite for any learning
Change	Difference in amount of knowledge, experience or altered beliefs/values between time t_1 and time t_2	Any increase or decrease in knowledge/experience or belief different from the status quo at time t_1	Same as at previous time (time t_1)	"I worked on the issue over ten years"; "We received new studies proving the contrary, that changed our perspective"	Prerequisite for any learning
Individual level	One person or a small group of people working in a team within one organizational unit	Interviewee; Immediate colleagues of the interviewee that they worked closely with	Overall organizational objective, communication that involves a large number of people across different organizations with different objectives; the wider society involving the media/ public opinion	"This new data really changed my opinion on the climate performance of biofuels"; "Me and my colleagues in Unit A.2/in DG Climate Action . . ."	Any learning type

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Organizational level	Policymaking that involves different directorate generals of the European Commission (EC), or policymaking between the EC and the Parliament/ European Council	Overall organizational objective, communication that involves a large number of people across different organizations with different objectives	Interviewee; Immediate colleagues of the interviewee that they worked closely together with; the wider society involving the media/ public opinion	"The Commission pushes for a xyz target"; "There was a fight between DG Energy and DG Environment on the model used for biofuel life-cycle analysis"	Any learning type
Sociopolitical landscape	Stakeholder in the wider society, outside the immediate policymaking arena such as media, voters, politicians, in local/state/ national parliaments, nongovernmental organizations, overall civil society and ordinary citizens, the policymaker's perception of the public mood and demands	Policymaker's proxies to determine preferences of the wider society involving the media/ public opinion, frequently over longer time span (e.g. opinion polls, submissions to public consultations)	Interviewee; Immediate colleagues of the interviewee that they worked closely with; overall organizational objective, communication that involves a large number of people across different organizations with different objectives	"Everybody was moving in the same direction"; "The public support for renewable energies was overwhelming"; "People came to realize the importance of acting on climate change"; "There is an overall demand in society that public money helps provide public goods"	Any learning type
Factual learning	Reflection on new information and subsequent change in knowledge compared to status quo	References to knowledge, information, studies, evidence, and other factors, and that actors reflected upon the input and remember it	Increase in experience, no reflection on or change in knowledge about issue, also due to an already existing, very high level of individual expertise	"We incorporated the emerging evidence on the uneven greenhouse gas performance of biofuels into our policy proposal"	

(*continued*)

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Key Concepts and Aspects of Learning (continued)

Code	Definition	Inclusion Criteria	Exclusion Criteria	Examples	Corresponds to Learning Type
Experiential learning	Reflection on experience related to policymaking and subsequent increase in experience (usually working experience)	References to working on a policy proposal over a certain time span; reflection on experience with conclusion not to modify behavior in future	References to knowledge/facts/ studies or changes in underlying beliefs	"Through working on the RED I had a crash-course on renewable energies"; "By contributing to the work of the agricultural committee in the Parliament I gained much experience"; "The Parliament is involved in co-decision-making on the Common Agricultural Policy for the first time and gaining a great deal in experience"	
Constructivist learning	Changes in underlying beliefs, values, how people see an issue/ regard it as important, prompted by reflection on an increase in knowledge or working experience on the issue	References to changed opinions, how people saw the issue, higher regard for the issue, shifts in the value or belief system	The person/ organization already held the belief that acting upon the issue is important before being involved with the specific policy proposal	"Al Gore's movie put the problem of climate change in the public's mind, people came to understand that it is important to act on climate change"; "I refined my belief that all biofuels are good"	

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Learning
(reflection on input and subsequent change)

Code	Definition	Inclusion Criteria	Exclusion Criteria	Examples	Corresponds to Learning Type
Knowledge	Input to policymaking by external sources via information provision; *frequently meant by interviewees when they use the word "learning"*	References to information; component of factual learning	References to activities or time spent working on a specific issue or to how they saw/ interpreted the issue	"Scientific studies"; "Expertise"; "Research findings"; "Evidence"	Factual learning
Experience	Active engagement with policy issue area by working on it	References to activities or time spent working on a specific issue; component of experiential learning	References to information or to how they saw/ interpreted the issue based on their values/attitudes	"Working experience"; "Through working on the RED, I had a crash course on renewable energies"	Experiential learning
Underlying beliefs	Point of view held by individual, institution or society that also reflects their values and frame of mind regarding an issue; normative judgments regarding a potentially contested issue	References to how people/ organization/ society also saw an issue through their lens of previous attitudes and values, component of constructivist	References to activities or time spent working on a specific issue or in response to specific information	"I really believe that renewable energies are a good thing/the right solution to pursue"; "It is important to consider the carbon footprint of an energy source"; "We must also consider public goods such as the environment"	Constructivist learning

(*continued*)

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Alternative Explanation
(reflection on input, but no change) (continued)

Code	Definition	Inclusion Criteria	Exclusion Criteria	Examples	Corresponds to Learning Type
Political interests	Normative point of view regarding an issue based on preferences of interest groups (political parties, business, powerful individuals)	Reference to politics, political level, politicians, organizational objectives that are influenced by special-interest groups	References to scientific evidence, public good/ res publica, but also pure bargaining as a regular part of the negotiation/ decision-making process	"I defend my organization's/ superior's political interests"; "They made a deal with X to get their agreement on another issue"; "Politicians pushed through their parties' interests" Alternative explanation	
Following orders	Receiving an order from a superior/ organization with legal power to give orders, carrying out this order regardless of personal/ organizational objectives	Reference to demands from Parliament/Council, Commissioners, politicians in EU member states that were carried out/ policies developed in response	Reference to autonomous decisions taken within the individual's unit, policy entrepreneurial activities, persuading superiors, taking ownership/leadership in policy development	"The European Council tasked us with the development of a directive"; "The Commissioner asked our DG to formulate a proposal"	Alternative explanation
Institutional process of policymaking	• Comitology • Interservice consultations • Informal communication	Description of formal and informal policymaking procedures, information exchange in regular meetings, institutional culture of information exchange, gathering information and developing proposals	References to exceptions from procedure or strong individual input into the decision-making process	"This is how policy is made in the EU"; "This process is being repeated every x years"; "This is how the policymaking process works"	Alternative explanation

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Negotiation/ bargaining	Policymakers represent different positions on an issue trying to come to an agreement that is as close to their negotiation optimum as possible, but at least within their negotiation mandate	References to representing the interests of an organization in a negotiation setting that match not necessarily with the interviewee's/ negotiator's personal point of view	References to negotiation settings, exchange of positions carried out between the European Commission and the Parliament/ Council, among member states and MEPs	"We have a negotiation mandate that we have to represent"; "It was clear that the member-states would never agree to this"; "We made a deal to get them to agree to our proposal"	Alternative explanation
Lobbying	Following the proposals made by/ input provided by nonnational interest groups	References to input provided by businesses and nongovernmental organizations that was taken on by decision-makers; amendments provided by interest groups to MEPs	References to the development of a policy based on scientific evidence or previous policies; policy was developed independent of interest group involvement	"We [special interest group] provide our input to the decision makers at meetings and conferences"; "MEPs take on our proposals, modify them, and introduce them as amendments"	Alternative explanation

Nonlearning
(no reflection on input, no change)

Code	Definition	Inclusion Criteria	Exclusion Criteria	Examples	Corresponds to Learning Type
Defensive avoidance	Not wanting to deal with the issue; ignoring evidence; avoiding losing face by acknowledging mistakes	Reference to mistakes from a normative point of view, but carrying on with business as usual	Remarks that the key actors reflected on the issue but decided not to pursue it for other reasons	"They just ignore all the evidence, bury it, they don't want to reflect on it as they would realize that they were wrong"	Nonlearning

(*continued*)

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Nonlearning
(no reflection on input, no change) (continued)

Code	Definition	Inclusion Criteria	Exclusion Criteria	Examples	Corresponds to Learning Type
Group think	Group of actors lives in their own "bubble" and acts according to their view of the world, avoid to acknowledge/ignore any mismatch between their view and external factors (e.g., laws, social norms)	References to being detached from so-called real people, living in the "Brussels bubble" without knowing the situation in the member states	Remarks that demonstrate awareness of other stakeholders' points of view and the situation of the people affected by the policy	"I don't think policymakers in Brussels know how disastrous their policy will be for farmers"; "Everyone in my network thought this was a great idea to pursue, but it turned out to have negative consequences"	Nonlearning
External constraints	Lack of time due to high workload/ overload	References to material or temporal constraints	Remarks indicating that lack of resources/ time/personnel is not a hindering factor	"I would like to read all studies and think about them, but as MEP I don't have the time as my day only has 24 h"	Nonlearning

Conditioning Factors
with positive/negative effect on learning types

Code	Definition	Inclusion Criteria	Exclusion Criteria	Examples	Corresponds to Learning Type
Academic background	Education of the individual	References to education or academic training in a certain discipline	References to working experience	"I have a PhD in agricultural economics"; "I am a mechanical engineer by training"	Any learning type
Working experience on topic	Individual has worked on the policy area for a certain amount of time	References to duration of specific work experience in the policy field	References to education and training	"I worked on agricultural policy for 15 years"	Any learning type

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Leadership style of superior	Approach of individual of higher rank than the interviewee to managing and steering the team	References to the way the superior communicates with the team, the use of adjectives to describe leadership style	References to education or background of the superior	"My head of unit is very supportive; he encourages us to share our knowledge on the issue"; "My boss creates a competitive atmosphere"	Any learning type
Network to other actors	Regular contact with other relevant actors and exchange about key issues of concern	References to regular meetings/ communication, knowing each other, informal sharing of information/ experience	References to isolation from other actors engaged in policymaking, independent work	"We have regular meetings with colleagues from other DGs to coordinate"; "We negotiate regularly and I know my counterpart well"	Any learning type
Policy entrepreneur	Individual that is proactive, takes on relevant position, tries to convince other actors of new evidence	Reference to an individual that is personally convinced that the policy is the right thing to do and actively promotes perspective	Reference to institutional machinery or no special role of individuals in the development of policy	"She really believes in what she does"; "She is very persuasive and pushes the proposal through the committee"	Any learning type
Institutional capacity	Ability of institution to adequately address the policy problem, not prohibitively constrained by time or resources (i.e., personnel, monetary, goods)	References to resources such as personnel, budget, time to develop/ review policies and form a position	References to individual capacities (e.g., in terms of knowledge or experience)	"The budget is very limited; thus we cannot pay for external advisors, studies, or consultants"	Any learning type

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Appendix 2: List of Interviews

Interview Number	Code of Interviewee
1	EC 1
2	EC 2
3	EC 3
4	EC 4
5	EC 5
6	EC 6
7	EC 7
8	EC 8
9	EC 9
10	EC 10
11	EC 11
12	EC 12
13	EC 13
14	EC 14
15	EC 15
16	EC 16
17	EC 17
18	EC 18
19	EC 19
20	EC 20
21	EC 21
22	EC 22
23	EC 23
24	EC 24
25	EC 25
26	EC 26
27	EC 27
28	EC 28
29	EC 29
30	EC 30
31	EP 1

(*continued*)

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Interview Number	Code of Interviewee
32	EP 2
33	EP 3
34	EP 4
35	EP 5
36	EP 6
37	EP 7
38	EP 8
39	EP 9
40	EP 10
41	MS 1
42	MS 2
43	MS 3
44	MS 4
45	MS 5
46	MS 6
47	MS 7
48	MS 8
49	MS 9
50	MS 10
51	MS 11
52	MS 12
53	MS 13
54	MS 14
55	MS 15
56	MS 16
57	MS 17
58	ENGO 1
59	ENGO 2
60	ENGO 3
61	ENGO 4
62	ENGO 5
63	ENGO 6
64	ENGO 7
65	ENGO 8
66	ENGO 9
67	ENGO 10
68	Industry 1
69	Industry 2
70	Industry 3
71	Industry 4
72	Industry 5
73	Industry 6
74	Industry 7

EC = European Commission; EP = European Parliament; MS = Member State; ENGO = Environmental nongovernmental organization; Industry = Industry representative (agricultural lobby/energy industry).

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